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An Address.[1]

MODERN IMPACTS ON GENERAL PRACTICE.

By J. GAVIN JOHNSON,
Retiring President of the Victorian Branch of the British Medical Association.

THE tremendous advances of modern medicine have made a great impact upon general practice and the general practitioner, who is now being reorientated in a new world of medicine. Fifty years ago the vast majority of doctors were general practitioners, and few patients knew any other kind of doctor. The general practitioner was their doctor, and their trusted counsellor and friend. He was almost an all-sufficient entity in the patient's mind and life. The general practitioner still occupies a very important place in the community, in the life of his patient and in the complex structure of the medical profession; but it is a vastly changed sphere.

The knowledge of the human subject, both in health and in disease, is today so vast that no one brain can contain it all. Neither can one pair of hands be skilled in all the operative procedures of surgery. It has, therefore, become necessary for many doctors to limit their practice to specified fields of medicine, surgery, or obstetrics and gynæcology, in order that they may become expert and proficient in those fields. The tremendous increase in the number of specialists and specialties in recent years tempts one to wonder what is to become of general practice. Is it to be the waste-paper basket of the profession, into which is cast the material that no specialist wants? Or can it remain, as it has been in the past, an essential and dignified part of the profession?

The growth of knowledge that has necessitated the great increase of specialization within our profession has brought untold benefits to mankind; but these benefits are, of course, accompanied by many changes: changes in the outlook of doctors, in methods of practice, and in the attitude of patients. All these changes must be recognized, understood and faced in a realistic manner.

The change of attitude of the patient has progressed slowly through the years. As was stated before, fifty years ago he had one doctor and would not have any other, for his own doctor was the only one who really understood him. Twenty-five years ago the patient began to realize that his own doctor could not be in himself a complete encyclopædia of medical knowledge and practice. When the general practitioner felt that his patient needed the assistance of a skilled specialist, and advised him accordingly, the advice was accepted, but with some reluctance. It was a case of persuading the patient to

[1] Delivered at the annual meeting of the Victorian Branch of the British Medical Association on December 2, 1959.

accept advice in his own interest, and the acceptance of the advice was usually accompanied by a demand that the general practitioner should be present at the first consultation with the specialist, and certainly at any operation that was later to be performed. It seemed as though the general practitioner was still the welfare officer of the patient, and he was entrusted with the responsibility of seeing that the specialist did that which was right and proper for him. Today, patients realize as never before the great value of the services they can receive from doctors with highly specialized training. If they feel that their condition is not progressing as favourably or as quickly as they had expected, then they are quick to ask whether a consultation with a specialist would be of benefit to them; they may even demand such a consultation; and it is here that the wise general practitioner anticipates the feeling of the patient, and suggests the consultation before the demand is made. If the consultation confirms the diagnosis and treatment of the general practitioner, then his reputation is enhanced in the eyes of his patient; if either the diagnosis or treatment is substantially altered, then the consultation has been of value to both the patient and his doctor, who has learned something thereby. Although the patients of today are much more specialist-minded than were the people of past years, they still like to have their general practitioner with them in times of strain or crisis. They still ask us to be present at operations performed by specialist surgeons—who, of course, have the assistance of specialist anæsthetists and well-trained theatre staffs, so have no real need of the general practitioner's presence. The patient now likes his doctor to be there, not to supervise what the surgeon does, but to see what is done and why, so that he will be made fully aware of the condition of the patient he will again be called upon to treat on many subsequent occasions. The patient also likes his own doctor's presence to give him the confidence that can come only from a mutual understanding and friendship. This must always remain an important function and duty of the general practitioner.

Now, what is the effect of specialization on the general practitioner? And what are the general practitioner's reactions to the enormous heterogeneous collections of specialists and specialties that are found in all large cities, particularly in the precincts of teaching hospitals? Are these for the betterment or the detriment of general practice? The impact is felt most by doctors who practise in suburbs near our great teaching centres. I have practised in such an area for 24 years, so my remarks will be based on my experience of this locality. The further my colleagues practise from such teaching centres where specialists in all branches are always available, the more will they have to depend upon their own resources, and the more will they be justified in so doing; but with modern transport facilities, there are few occasions on which a general practitioner is justified in attempting to treat a case which is beyond his scope and training.

Is it any wonder that the general practitioner finds himself confronted by the question: Should I continue to treat this patient, or should I refer him to one who specializes in the particular field of his illness? Is this fair and proper general practice, or is it in the best interests of the patient to hand him on to a colleague more highly trained and skilled in the appropriate limited field of medicine or surgery? Am I thoroughly competent to continue to undertake the full care of this patient and his illness? It would, of course, be very helpful if some authoritative body could clearly define in specific terms what is good and proper general practice; but a clear-cut definition of that nature can never be given, for general practitioners vary tremendously in their natural ability and in the extent of their post-graduate training and experience, and the essential demands made on each one will depend largely upon the availability of other assistance. The geographically isolated practitioner will be forced to accept responsibilities that his suburban colleague would immediately share with a specialist, or frequently with a group of specialists. Where specialist assistance is available, the decision of when to refer a patient must depend upon the doctor's ability to render the required service efficiently and completely. This in turn depends upon the doctor's initial training, his post-graduate training and experience in hospital years, and his subsequent opportunities to retain and improve the skills acquired in those years of training. A young doctor may acquire considerable skill and efficiency in performing routine surgical operations during his resident years in well-staffed hospitals; but if he then goes into a practice where he sees few patients requiring surgical treatment, it will not be long before he feels that his surgical technique is deteriorating, and there will be a subsequent loss of confidence in rendering such services to his patients who are also his acquaintances and friends. The same position arises in medical cases that require much detailed treatment, such as diabetes and infant-feeding problems. Unless one is confronted with these cases frequently, the necessary details slip from one's memory; but this, of course, can be regained by reference to literature or occasionally by a telephone conversation with a consultant. The general practitioner may suddenly be confronted with an obstetrical emergency such as he has not had to treat for years; but the consultant obstetrician will perhaps see at least one such case each week. It is therefore not only necessary for the general practitioner to attain a degree of skill, but also to face the problem of maintaining and improving that acquired skill. To this end, the Australian College of General Practitioners is endeavouring to cooperate with other colleges and interested bodies to provide these needs of all general practitioners. It is to be hoped that all who can assist in this way to provide and maintain an ever-improving standard of general practice will do so; but little will be accomplished unless the individual general practitioners avail themselves of the opportunities provided. It is often disappointing to hear a splendid lecture or a well-planned symposium, on a subject most suitable for general practitioners, delivered in this hall to a very small audience almost devoid of general practitioners.

If a general practitioner is able to be well trained in any procedure and has sufficient opportunity to employ that procedure in practice, then he should be able to give his patient a service comparable with that of a specialist in that field. For instance, if a hospital resident is given adequate instruction in the art of tonsillectomy and then allowed to do sufficient tonsillectomies under supervision to become proficient, when he goes into practice as a general practitioner he should be able to remove tonsils as efficiently as an ear, nose and throat specialist. The great difference between the general practitioner and ear, nose and throat specialist is not in their ability to successfully remove tonsils, but in the specialist's thorough competence to perform the major surgical operations that the general practitioner should not attempt; moreover, through frequently seeing conditions that are rarely seen in a general practice, the specialist is able to maintain an efficiency in treating those conditions which it is not possible to achieve in general practice. As a team, the two together render a maximum service to the community.

It is undoubtedly wrong for a general practitioner to continue to treat a patient who requires a skill and knowledge beyond his, and it is equally wrong for the practitioner to fall into the habit of referring nearly everything to consultants. That is bad for the patient and the practitioner, and a nuisance to the consultant. The decision of what and when to refer can be made only by the individual practitioner, who must be guided by the advice of Pope:

> Be sure yourself and your own reach to know,
> . . . . but be discreet,
> And mark that point where sense and dulness meet.

The specialist brings to the general practitioner special knowledge and skill required in serving his patient, sharing with him the burden of responsibility, and sometimes lifting it entirely from his shoulders. The two must always work together as a team, mutually trusting and respecting each other, and selflessly cooperating in

service to the patient, thereby giving a true general practice to the community greatly exceeding in value that which one man alone could contribute.

Group Practice.

The coming of group practice, like other changes, has brought benefits to patients and doctors alike; but, like the development of specialization, it is accompanied by difficulties and dangers. The benefits brought to the patient are a constant availability of medical service, for in any group of doctors there should always be one available for urgent and out-of-hours calls. It should never be necessary to refuse calls, so the patient is given a full 24-hour service. Another benefit to the patient is that, in a well-organized group practice, each doctor has sufficient leisure to care for his own health and therefore remain well and efficient. In no walk of life can an overworked, harassed and fatigued man remain 100% efficient and give the maximum service to those he serves. Group practice should enable each member of the group to keep reasonably fit, both physically and mentally, and so give of his best to his patients. These two benefits alone should vindicate the advent of group practice from the patient's point of view. The one danger I see is that of the group becoming too impersonal, so that the patient feels he is simply handed on from one doctor to another, without ever getting to know any one doctor, and without any doctor really understanding him as an individual. This is, of course, bad for medical practice—for patient and doctor alike. It should and can be avoided in a well-conducted group. Each doctor should have his own fixed daily consulting hours in his rooms, so that the patient, by coming in these hours, can have the doctor of his choice. When calls are received for a doctor to visit a patient, the calls should be entered in a book with the initial of the doctor asked for beside them, and that doctor should go to the patient, even if he does happen to be a little busier than one of his partners. If it is impossible for the doctor to accept the call, the patient can be told approximately how long it will be before his doctor can visit him, and can then be given the choice of waiting, or of selecting one of the other partners. This situation does not arise very frequently. If it is explained to a patient that it is only during after-hour periods (night and week-ends) that he is asked to accept a partner of his own doctor, he will almost invariably appreciate the situation quite happily, realizing that his doctor, like himself, is only human and therefore requires rest to remain well and efficient. The patient should be assured that he will be referred back to his own doctor as soon as practicable, and that if the attending doctor finds a situation requiring knowledge of the patient's history, he has easy access to his partner and to the patient's record kept at the consulting rooms. The vast majority of people today accept this situation, realizing that they are receiving a good, efficient and continuous day-and-night medical service.

From the doctor's point of view, group practice brings the possibility of times off duty for rest, recreation and study. It should thus enable him to enjoy his home life and be a father to his family, instead of a mere producer of income, who is seen all too little by the other members of his family. He should have time to read his journals and other medical literature, to keep himself informed of modern trends in practice. In most partnership agreements, provision is made for annual holidays, which can usually be taken without the need of a *locum tenens*, the burden of the man away being shared by his partners. They are not over-burdened, particularly as holidays are usually taken in the summer months when most practices are less busy than during the winter, and some time-absorbing duties can be deferred. Patients are thus not asked to accept a total stranger as a substitute for their doctor. In addition to annual leave, it is wise to provide for one or two weeks' accumulative leave, which can be used as long-service leave, or for the purpose of attending post-graduate courses. Such an arrangement in a group practice not only makes life more pleasant for the doctor, but it can make him a much better doctor. Another advantage of group practice to the doctor is that it gives great opportunities for the discussion of patients and problems with his partners. Believing that two heads are sometimes better than one, I think this is a very valuable asset. It also allows for some degree of fostering particular branches of medicine within a group, so that each member can be better trained in one branch of the practice than the others. In this way a more complete and better service can be given to the public. This is a most desirable state of affairs; but each member of the group should remain a general practitioner and not attempt to turn the practice into a group of specialists. Such action would make the interchange of duties and times off more difficult, and it would invariably lead to more handing of patients from one doctor to another, so that the patients would not feel that any one member of the group was really their own doctor. This doctor-patient relationship is still very important, but it is easily destroyed.

The importance of allowing adequate time for post-graduate study and experience cannot be over-emphasized. It maintains a doctor's interest in his professional life and duties, and stimulates him to endeavour constantly to reach higher standards of medical practice. This is a clear-cut obligation to our patients, so it should be planned as an essential part of each group practice. It is the doctor who does not take time off to keep up to date who will feel the greatest impact by the ever-growing number of specialists and specialties around him. Take, for example, the position of modern anæsthesia. The doctors of my vintage, who had two and three years' post-graduate hospital experience, were able to go into practice well trained and experienced in the administration of ethyl chloride, chloroform, ether and nitrous oxide. We had given some hundreds of anæsthetics in hospitals before entering our own practices. In practice, if we referred a patient to a surgeon, he would almost invariably ask us to give the anæsthetic, and he usually seemed well satisfied with it. Today, although we have given thousands of anæsthetics without a single death or any serious complication, we could only enter a modern operating theatre with a feeling of shame if we dared to carry a bottle of ether, the very odour of which is obnoxious and almost unknown to the modern theatre nursing staff. The surgeon rightly prefers a modern anæsthetic with relaxants, and a specialist anæsthetist with his circus of equipment to administer it. It is better for the surgeon and better for the patient. I thus find myself giving very few anæsthetics today, not because I have lost my skill, but because new skills have arisen that I have not taken time off to acquire.

To offset the advantages of group practice, there are disadvantages for the doctor; but they are few, the chief being the danger of incompatibility between partners. This can be largely avoided by a trial term of assistantship or some such arrangement before the actual partnership is entered. There is the danger of one partner's being more sought after than another, so that he receives more than his share of the work, while his less acceptable partner enjoys the leisure of unpopularity. All such difficulties and differences of opinion can surely be discussed in a frank and friendly atmosphere and thus overcome in a spirit of mutual cooperation. If three or four colleagues cannot work happily together in a cooperative spirit of give and take, then what hope can there be that the world will ever see peace and understanding on an international level?

All difficulties will be less if the group is not allowed to grow too large, for then there are less personalities to clash. It is also in the patients' interest to limit the size of the group, for if the group is large, each partner tends to take more time off, and thus become less available to his patients, who are forced to accept a substitute doctor more often than is really necessary. A group of four seems to me ideal. All four should be general practitioners—one with some post-graduate surgical training, two competent general practitioner physicians, one with some pædiatric experience and one who has been a resident in an obstetrics hospital or ward. Such a team should work happily together, enjoy all the privileges and advantages of a group, and give a first-class general practitioner service to the community.

Undergraduate Teaching.

General practice must remain an essential, honoured and dignified branch of our profession. It should be presented to our undergraduates as a career of fascinating interest and an essential service to humanity, and one that gives to the practitioner a wholesome satisfaction not easily surpassed in any other sphere. Undergraduates must not be left with the idea that general practice is only for those who are not good enough to enter a field of specialization. This impression is in fact being given to our own students, for they are taught only by specialists, who capture their admiration and imagination, and who, with a genuine desire to teach, tell them of mistakes made by general practitioners that had later to be corrected by specialists. Perhaps the students do not quite realize that specialists too make mistakes.

We were told at a recent British Medical Association meeting of a patient in a teaching hospital who had been presented to final-year students for three years as suffering from splenomegaly; the mass was later discovered to be an enormous cyst of the left kidney.

I well remember referring a young boy to a teaching hospital, with a letter explaining that I considered he had otitis media and early meningitis, and that because of the absence of signs of mastoid disease, the meningitis was a direct infection of the meninges, not secondary to the middle-ear disease. He was admitted under an ear, nose and throat specialist, who agreed with the diagnosis of otitis media, but not with the meningitis. A paracentesis was done that afternoon, and all was considered well. Thirty-six hours later the child had convulsions. Then a lumbar puncture was done, revealing pneumococcal meningitis, after 48 valuable hours of treatment had been lost. The child died about ten days later. Had some notice been taken of the general practitioner's letter, the opinion of a pædiatric physician would have been sought as well as that of the ear, nose and throat specialist. Thus the diagnosis of meningitis might have been confirmed in time to save the child's life.

Much more could be done at the undergraduate level to present the true value of general practice.

Young graduates should be advised in the choice of post-graduate appointments to fit them for general practice, rather than just take what comes their way, and then drift into practice inadequately trained in some important branches of their practice. It seems a pity for a young man to spend months as a junior in a highly specialized unit and then go into general practice, where he will never use the experience gained, while other commonly needed experience has been omitted from his training. A young man going into general practice needs a sound, broad training in all the commoner disorders of the human subject. Such a training could surely be achieved in some of our large, well-staffed country hospitals, particularly if the honorary staffs could be stimulated to take a real interest in teaching their residents, and in giving them opportunities of gaining first-hand experience. Such hospitals could be first-class centres for training prospective general practitioners, and for providing refresher courses for established practitioners.

I once heard Sir William Upjohn say that the general practitioner had often been described as the backbone of the profession, but he preferred to regard him as the cardio-vascular system of the profession, because of all our systems it was that one which seemed tireless, working continuously throughout life, and always responding well to continued periods of stress and overloading. I sincerely hope general practice will never become the dried skeleton of the profession, from which all the meat has been assiduously picked by a multitude of specialties.

Medico-Clerical Cooperation.

Another development that promises to bring change in the outlook of the general practitioner, and in fact of all doctors, but perhaps exerting most influence on those in general practice, is the conception of medico-clerical cooperation—a working together of doctor and clergyman in giving a total service to the whole human individual. This must not be confused with doctors' dabbling in religion or interfering in any way with their patients' own creed. It is rather a fuller realization of the essential nature of humanity. It is a logical step forward and extension of our service, at present limited to the physical body and, through psychiatry, to the mind. It envisages the care of the human spirit or soul within each individual patient, a service which we are untrained and perhaps unequipped to give; therefore it is reasonable that we should advise patients who we think need spiritual help to seek it through their own clergyman, much in the same way as we advise them to accept the advice and help of specialists in the physical or psychiatric realms.

The existence of an indestructible spiritual entity, or soul, within each one of us is not as yet accepted as fact by all doctors. Some openly laugh or sneer at the suggestion; but we must remember how leaders of our profession laughed when the great Harvey said that the blood circulated, and how French surgeons scoffed when the humble Pasteur spoke of living germs causing disease. The laughter has died away, and the names of those who laughed have been forgotten, but Harvey and Pasteur remain among the very great. There is much evidence to point to the existence of the human soul, the reality of spiritual experience, and the ability to enjoy fellowship with the source of all life, whom we call God. If asked a pointed question, most doctors say that they think there is a spiritual entity within each one of us, which may live on after our mortal bodies have perished; but they seem content to say that they know little about it. If there is a living soul within each of us that lives on after physical death, then it is by far the most important part of us. It is unreasonable and illogical to be content to remain in ignorance of this. We as doctors should seek knowledge of the human soul, that we may comprehend and serve the whole person. Such knowledge could revolutionize our thinking and our service. The study of the human body, both in health and in disease, has been pursued on a scientific level for many years. Likewise men of scientific training are exploring the intricacies and depths of the human mind. Why should we not extend our study into the realm of the spiritual and join hands with those specifically trained in that sphere? Could not the doctors and clergy combine to answer the age-old question: "What is man that thou art mindful of him?"

This larger conception of the essential nature of humanity will give us a much clearer understanding of our patient and his needs. Just as we have learned that physical illness may cause psychiatric disturbances, and that mental illness may in like manner be the underlying cause of a physical ailment, so we may find that spiritual ill health is reflected in the other two planes of life. It may well be that we shall extend the term psychosomatic relations to include the spiritual, regarding each patient as a triad or little trinity of body, mind and soul, each component of which must be healthy if the person is to enjoy full health. Such an understanding may well lead us to an explanation of phenomena which today we admire but cannot understand. Take, for instance, the healing process of bone. The orthopædic surgeon brings together the broken fragments of a bone and fixes them in position, and Nature does the rest. An exquisite and orderly cellular reaction takes place, culminating in new bone formation and firm union of the fragments. What forces activate the groups of cells employed? What guides them, each in their own specific duties, some making bone, some absorbing it? What coordinates them in producing the solid, moulded, finished article? Perhaps there are spiritual forces, of which we have no scientific knowledge, but which collectively we call Nature. By acting upon this hypothesis, should it not be possible to bring a patient closer to the originator and controller of all spiritual force, so that these processes may be accelerated and augmented, with the production of more rapid and more complete healing? There are many people, both doctors and laymen, who believe this is just what is brought about by the agency of prayer, when a patient is thus brought into the presence of God, who permits spiritual forces to accelerate and complete the work of healing. This is quite different from what is described as a miracle, which is something sudden, dramatic and supernatural. It is simply

an acceleration of the natural, and the satisfying of a spiritual instinct which lies dormant in each person, an instinct which urges us to seek ultimate security in fellowship with God. This instinctive search is seen at work in primitive tribes and among the most enlightened communities. It is, however, fashionable in the modern world to allow it to become submerged by a veneer of materialism.

A realization of the reality of spiritual life and forces will bring to the doctor new resources of help for patients, and particularly for those for whom we of ourselves can do little. There will be comfort and assurance for all, even for the aged and dying. Death will cease to be death, and will become an expected and natural transformation from one sphere of life to another.

I well remember one unfortunate woman who was in the terminal stages of malignant disease of an antrum when I first saw her. She was completely deaf and unable to speak, and her sight was so impaired that she could neither read nor write. She had been a devout Anglican all her life, but the help she received from her vicar was impeded, for she could not hear his voice or read anything he wrote. Even her faith seemed to forsake her under the burden of her suffering. Realizing that neither speech nor the written word could reach her, I remembered that I had in my home a copy of a famous painting of Christ in Gethsemane. This was placed on a mantelpiece close to the head of the sufferer's bed. She saw enough to recognize it, and I shall never forget the expression of peace and triumph that replaced the suffering and despair of her tortured face. She lived for a few days, retaining that expression of peace and confidence in her future which she communicated to her sister, who could read her lips, and then she died; but did she really die, or ascend to life eternal?

Some doctors will explain my patient's reaction to the sacred picture at the psychiatric level of suggestion or hypnosis; but others will know that it made her conscious of the presence of God. Which is right?

Doctors need to know the answer to "What is man?" that they may serve him better.

RESCUE BREATHING FOR THE PARTLY-DROWNED.

By LYLE BUCHANAN, V.D., F.R.C.S., (England), F.R.C.S. (Edinburgh), F.R.A.C.S.,
Sydney.

THE loss of life from drowning alone in Australia is about 500 persons each year, of whom well over 100 are young children. These young children usually die within a few feet of safety, and knowledge by mothers and other children could possibly save at least half of them.

The methods to be outlined are simple—so simple that children have picked them up after one or two demonstrations. With the cooperation of the executive and instructors of the Royal Life Saving Society, I have evolved a method by which they can be carried out in deep water.

"Part-Drowned" and "Threatened with Drowning".

In this review, a sharp distinction is drawn between the partly-drowned and those only threatened with drowning. Those who are only threatened with drowning can, by this distinction, still breathe. The distinction can be made in the water, in the following way.

There is no means of knowing whether there is water in the lung, and indeed there may be none (*vide infra*). The patient with spasm of the glottis, or of the bronchial tree, or of the pulmonary vessels, may vomit quarts, and may still be unable to breathe. If for any reason he cannot himself take a breath within four or five minutes, and if no one breathes a breath into him, he will certainly die, from lack of oxygen.

A man is only threatened with drowning if he can talk, or make intelligible sounds, or resist rescue purposefully. Such patients do not come into consideration here.

Rumbling or gurgling or croaking noises, and a purplish-red or, worse, a blue or dead-white colour, are warnings of part drowning. Above all, if the patient is not quite obviously breathing in some way, or not conscious, he must be treated as "apparently drowned".

The Statistical Risks of Drowning in Australia.

More than 100 children aged under 14 years will die from drowning this season, and over 500 of all ages. The majority, over 80%, die in pools and creeks and lagoons, in many of which an adult could stand. Such fatalities could largely be prevented by following the principles of the "Water Safety Handbook" of the Royal Life Saving Society.[1] A great many of them can be saved while still in the water, by methods now for the first time described below, which are also largely applicable in the surf.

The Physiology of Drowning.

Much work is still going on. The physiology of death from drowning is necessarily deduced from animal experiments. So many changes in blood and heart occur at and after the moment of dying that post-mortem inferences in humans have been proved to be misleading.

In sheep, Halmagyi and Colebatch, of the University of Sydney Medical School, reported during an address read at the Canberra Convention that (with abundant tests, observations and controls) small amounts (to 5 oz.) of salt water instilled into a sheep's lung, without submergence at all, caused sudden death in three out of eight normal sheep. Very small amounts of either fresh or salt water caused (*a*) bronchial spasm and obstruction and (*b*) pulmonary arteriolar spasm, with (*c*) abrupt hypoxia and (*d*) pulmonary hypertension, for reasons still being investigated by them. Some results will, I hope, be made public at the International Convention on Life Saving, to be held in Sydney from March 14, 1960.

In dogs (Swann *et alii*, 1953) there is initial struggling and apnœa, then after one to two minutes an involuntary inspiration, large amounts of water being drawn into the lungs. In some cases glottic spasm prevented immediate flooding. Much swallowing of water causes vomiting, and then inhalation of water in gasps.

Donald (1955) showed that, after fresh water entered the lungs, there was enormous absorption of fluid into the circulation with hæmodilution (up to 60% to 150% of total blood volume). Hæmolysis occurred in fresh water, and much free hæmoglobin showed in the plasma. There was a rise in potassium concentration in the blood, both from red-cell disintegration and from severe anoxæmia. Ventricular fibrillation supervened, in one to three minutes after submersion in fresh water, and in not more than three to seven minutes in any fluid. Respiratory failure occurred 10 to 20 seconds before or after fibrillation, which was accompanied by profound shock and inevitable death.

Lowson (1941) described his own almost parallel experiences, with final recovery on the surface and copious vomiting; but no water was found in his lungs when tests were made.

Gordon *et alii* (1948) showed that ventricular fibrillation occurred in one to three minutes in fresh water in horses, cows and pigs. They found that in salt-water drowning salt moved into the blood, while fluid and protein moved into the lungs from the blood, with formation of froth; but heart failure was more often due to anoxia than to fibrillation.

On this point authorities vary (Swann, Gordon, Halmagyi). Obviously, until fibrillation and irreversible shock have occurred, rescue breathing may save the patient.

The Need for Modern Hospital Study.

There is very much controversy as to the effects of fluid in the lung, and there is need to learn much more. A

[1] The Royal Life Saving Society, New South Wales Branch, of which I am the honorary medical officer, is the largest single life-saving society in the world (51,000 certificates last year), and is responsible for still-water training and rescues.

very worthwhile study of the recently "saved from drowning", for all equipped hospitals, would be the following investigations carried out as an emergency and immediately: (i) plain X-ray examination of the chest (very important, even if the clinical findings are normal); (ii) estimation of the dilution or concentration of the blood; (iii) a full blood count; (iv) serum electrolyte estimations; (v) estimation of the clotting time, the amount of pulmonary œdema and hæmoglobin liberation.

Such observations would guide immediate emergency treatment and avoid "delayed collapse" and "immersion pneumonia". A detailed statement of any such investigations would be greatly appreciated by the secretary of the Royal Life Saving Society, Sydney, with the sending of a duplicate to the Post-Graduate Medical Research Foundation, Sydney, even if the findings are quite negative. Negative blood and X-ray results, together with all possible immersion and rescue notes or even the names of rescuers, would be welcomed equally.

Summary of Physiology of Drowning.

It is impossible to be definite about the physiology of drowning. The picture can be confused by accepting post-mortem findings as evidence of ante-mortem physiology. Much work remains to be done. Halmagyi's work is very convincing; it fits in with the known fact that the lung after death is often empty of fluid, and yet may show patchy consolidation. It seems probable that the first item in the drama is spasm, not only of the glottis, but of the bronchioles and of the arterioles; then other forms of blockage occur and anoxia follows. Probably at least one-third of drowned persons die primarily from anoxia following spasm. But just before death nerve control comes to an end. If the patient is still under water, the lung can then be flooded by water; this leads to the various findings of hæmodilution, profound alteration of electrolytes, froth in the bronchioles, etc. However, froth and blood coming from the lung and mottling in the X-ray film are not invariable harbingers of death.

The Universally Accepted Inference.

On one thing only are all theorists united — namely, that from the moment when apnœa sets in, the patient has only four to five minutes to live, unless he can take a breath within that time, or unless someone takes it for him. Once breathing has stopped, not one second must be lost. Rescue breathing must be started at once. Attempting to tow the patient in and place him on the sand will destroy the chance of life in at least three cases out of eight.

Information from Hospitals.

Verbal replies from hospitals so far regarding the condition of patients on admission indicate that in most cases the victim is either quite lively or quite dead. However, much further information on this point is required, and I would plead with hospital superintendents to send an answer to the *questionnaire* sent out by the Royal Life Saving Society in every case of apparent drowning in which the patient recovers (however lively the patients are on their admission to hospital). An immediate X-ray examination, even when the patients are apparently normal, is especially desired, as lung changes persist after rejection or absorption of all water.

Theory of Rescue Breathing.

"Rescue breathing" means breathing forcefully into a patient's lungs through either the mouth or the nose. It must have sufficient force to overcome spasm, and also to dislodge any water in the finer air passages. If mouth-to-nose breathing is done properly, then small amounts of fluid in the mouth or lung will not matter (see below). All anæsthetists know that quick hyperventilation is the only dependable method of clearing a choked lung.

How to Clear the Airway.

The problem is to ensure a clear airway for maximum effect. The tongue must be kept away from the entrance of the larynx. There is one reasonably sure anatomical means of keeping the laryngeal entrance clear and also preventing vomiting — namely, full backward head-tilt (*vide infra*).

Fluid or Debris and Blocking of Throat or Nose.

If the supine head and neck are kept flexed, fluids run down from mouth and nose onto the larynx and tend to maintain spasm. Even if the head is rotated, they cannot be removed, except with mechanical suction, without lifting the shoulders well up.

If the head is kept fully extended (back-tilted), with the shoulders high, fluids from both hypopharynx and nose run down into the oro-pharynx, whence they are easily removed by rotating the head and clearing the cheek with the fingers.

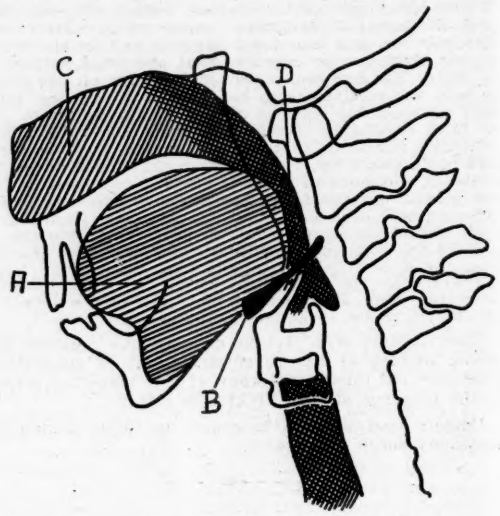

FIGURE I.

With the jaw and head flexed, ordinary X-ray films show clear air passages as above. The amount of air in the larynx is small, and is maintained only by the natural reflexes of a conscious patient. In the fully unconscious patient the laryngeal air tends to disappear completely except for the ventricle when the head is flexed, and the narrow air passage behind the tongue disappears, because reflexes no longer lift it away from the posterior pharyngeal wall. A, tongue; B, hyoid bone; C, nasal air; D, post-lingual space, maintained in the conscious patient.

If the nose tends to become blocked during rescue breathing, it is usually because the head is not sufficiently tip-tilted, or because the rescuer is blowing unequally into the two nares or is irritating the nose by jerky forceful breaths.

Anatomical Considerations.

Numerous X-ray films taken by Dr. H. B. L. Williams (personal communication) show that when the chin is down close to the chest (Figure I) the genio-hyoid line (that is, the length of the tongue base), averages one-and-a-half inches in the patients examined, and the root of the tongue protrudes far back, pushing down the epiglottis.

On the other hand, with the head fully extended at the atlanto-occipital joint (Figure II), the genio-hyoid line averages two and five-eighths of an inch in length. If the tongue is nearly doubled in length (100 to 57), its cross-section must be nearly halved. X-ray films taken in this position show that the base of the tongue is well above the epiglottis (five-eighths of an inch away). The hyoid itself is separated by a further half inch from the crico-thyroid mass of the larynx (one and three quarters of an inch against one and a quarter), and the infralaryngeal muscles are stretched and tightened. In full extension there is a tight line of muscle actually angulated forwards at the thyroid, running from the mental tubercles of the mandible to the inlet of the thorax, thus forcing the larynx tightly

back against the pharynx. Full backward head-tilt leaves a clear continuous airway, from the nostrils through the always-patent naso-pharynx, down behind the tongue, to a wide open laryngeal vestibule, and thence without interruption to the lung. It also prevents vomiting, and tends to prevent the blowing of air into the stomach. It abolishes the downward pocket of air seen in the hypopharynx during head flexion and also in the normal supine position

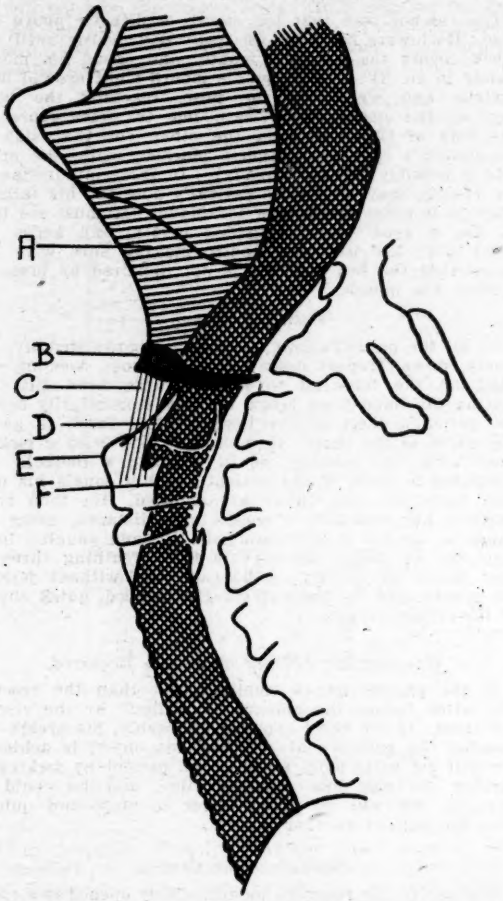

FIGURE II.

The wide-open airway seen in full extension of the head. A, tongue drawn up away from epiglottis and posterior pharyngeal wall; B, hyoid bone; C, tense infrahyoid muscles; D, epiglottis; E, thyroid; F, unimpeded and non-angulated airway.

(Figures I and II). It firmly squeezes the larynx back on to the stretched gullet.

Tilting the head back at the atlanto-occipital joint immediately raises the whole line of origin of the superior constrictor of the pharynx, from the hamulus of the pterygoid through the pterygo-mandibular raphe to the mylohyoid line and the palate. The superior constrictor and the palato-glossus, and to a certain extent the stylo-glossus, all thus lift up the base of the tongue, already narrowed in circumference by a nearly doubled length (Figure III).

The hyoid (carrying the tongue and middle constrictor) is pulled up away from the larynx, which carries the epiglottis, laryngeal vestibule and inferior constrictor. In this hyperextended position it is almost impossible to swallow, let alone vomit.

It is easy to check all this for oneself. With the chin depressed, the hyoid can be grasped and moved easily, and drawn forward with the fingers of the two hands away from the pharynx. With the head fully hyper-extended, if one grasps the two ends of the hyoid bone and tries to swallow, it will be found necessary to bring the head forward from full extension to do so. Because the cricoid and thyroid are pressed back hard against the hypopharynx by the tensed muscles, it is almost impossible in this position to blow air into the stomach, except under high pressure.

The Key to Successful Rescue Breathing.

The key to consistent success is full extension of the head at the atlanto-occipital joint. If it was not necessary to see that learners did understand how to extend this

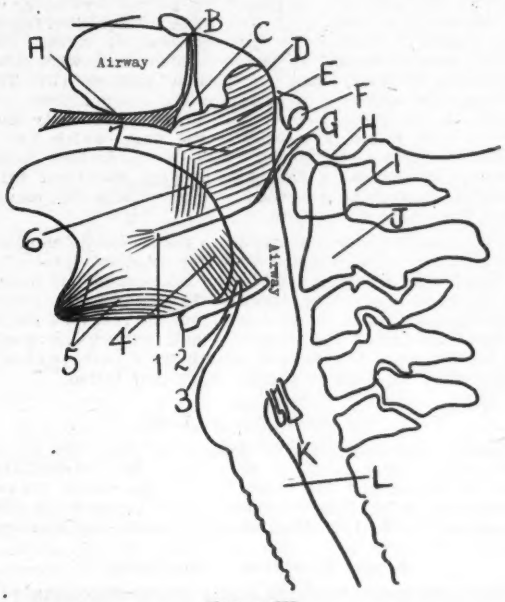

FIGURE III.

Anatomy of the muscles lifting the tongue as the neck is hyperextended: 1, stylogiossus; 2, hyoid bone; 3, epiglottis; 4, hypoglossus; 5, genioglossus; 6, palatoglossus; 7, superior constrictor of the pharynx. A, palate; B, nasal airway; C, hamulus of pterygoid; D, basiocciput; E, post-nasal space; F, auditory meatus; G, styloid process; H, articular condyles; I, first cervical vertebra; J, second cervical vertebra; K, cricoid; L, trachea.

joint fully, then there would be almost no need to practise the method. Unfortunately it is necessary. Many learners do not grasp the idea of continued full extension; otherwise the method could be taught on a film.

The Urgency of Rescue Breathing.

All writers (Schwann, Donald, Ivy, Safar, Ruben, Elam, and many others) emphasize (the words are Donald's): "Not a second, literally not a second, can be wasted. No time should be wasted in clearing the airways, loosening the clothes, feeling the pulse, listening for the heart, draining the lungs, selecting a slope." The same applies to towing a patient to shore.

Nothing must delay the breath of life. The most expert medical examination may only destroy the spark of life, if it delays respiration.

How Long Should Artificial Respiration be Continued by Non-Medical Personnel?

Many factors are involved—the survival time of the brain cells with anoxia, the impossibility of discerning small respiratory movements, the possibility of oxygen

exchange in the absence of observable movements, the possibility of "foxing" in a would-be suicide or exhibitionist, the very low respiratory exchange needed in a "frozen patient" and, last but not least, the feelings and prejudices of the relatives. The probabilities of useful survival after five minutes of complete cessation of transpiration are small; but respiration should be continued for at least an hour after the last known breath. Lucas and Witcher's (War Office pattern) bellows, the "C.I.G." oxygen pump, the "Ambu Resuscitator" are three very efficient pieces of apparatus for long continued mechanical respiration, if available.

Oro-Pharyngeal Tubes.

The Executive of the Royal Life-Saving Society considered and rejected any form of tube or resuscitator by which one breathed directly into the patient's mouth or pharynx, for purposes of practising rescue breathing, on the following grounds: (i) Any form of intrapharyngeal tube tended to make the "patient" gag or retch. (ii) Harder plastics tended to lacerate the throat, with some appearance of blood, when the "patient" gagged. (iii) The method only appeared to separate the rescuer from the victim. In fact, the rescuer was breathing directly into the patient's lung, and avoiding the nose, which has a built-in resistance to germs. (iv) Even doctors found difficulty in managing the jaw, keeping the head fully extended, controlling the tube and preventing the escape of air from nose and mouth.

C. A. Sara has drawn attention to the so-called "elephant tube", which is a modified tube for tracheal intubation provided with a light inflatable cuff that completely blocks the pharynx above the larynx. Through it, in actual drownings, air could be delivered from the rescuer's mouth to the vestibule of the larynx. Small immersions would not matter, even if nose and mouth were not completely sealed off. This method should be further tested.

The Chest "Rescue Tube".

Rescue breathing can be helped by the use of an "American rescue tube" (a very light, flat, semi-inflated tube to clip around the chest to give the victim greater buoyancy). Such "rescue tubes" could be made of thin alkathene, to fit into the rescuer's pouch until needed.

Rescue Breathing under Water.

The Underwater Research Group is experimenting with "rescue breathing" under water. The "elephant tube" could be combined with a bellows or an oxygen bottle.

Summary of Theory.

In summary, the essentials of rescue breathing are as follows: (i) the institution of forced "rescue breathing" at once, wherever the victim is; (ii) a full backward head-tilt (or jutting forward of the jaw if head-tilt is not possible, or both); (iii) continuance of ventilation by mechanical resuscitators, when available; (iv) help by the insertion of an oro-pharyngeal tube only when the airway is still defective.

Technique of Rescue Breathing on Land—Mouth to Nose.

Positioning (Figure IVA).

With the patient on his back, the head is fully hyperextended at the atlanto-occipital joint (full backward head-tilt), one hand behind the patient's neck being used to lift the neck and shoulders and the other on the patient's forehead to extend the neck fully. The patient's face should approach the vertical, and the rescuer should be looking down towards the ground into the patient's nostrils. His mouth should be vertically above the nostrils, and not nearer his own side of the patient's head. He must not delay in order to remove water or debris unless the amounts are gross and obvious. He rarely needs to draw the jaw forward, except in a case of rigid neck, in which case "jutting the jaw" (so that the lower teeth are in front of the upper teeth), can sometimes lengthen the tongue by one-third of an inch).

Kneeling to one side, and with one knee opposite the ear and the other opposite the neck (with elbows on the ground if this is more comfortable), the rescuer looks downwards into the nostrils. Only if he finds during the first breaths that he needs to lift the jaw does he remove his hand from behind the neck. The method of lifting the jaw is the same as that described below under "Technique for Babies".

Contact (Figure IV B).

The rescuer sees that his mouth is directly above the nose. He lowers his head vertically downwards until one cheek covers the patient's mouth, and opens his mouth widely in an "O". He places his mouth right around both nostrils and well onto the nose, reaching the bony part of the nose, taking care not to press more on one side of the nose than the other (or that side of the patient's nose may become blocked, while the other side is possibly blocked already). In those circumstances the rescuer may blame the patient's nose for his failure, when it is actually his own technique. He must see that he has a good "seal" with his mouth, and keeps his cheek over the patient's mouth, making sure with the hands that the full head-tilt is not impaired by pressure against his mouth.

Filling the Lung.

To fill the patient's lung, the rescuer blows steadily, but firmly, down (repeat down) into the nose, keeping one hand on the forehead to maintain the head tilt, but placing the hand from below the jaw momentarily across the patient's chest at the lower sternal level, to gauge distension of the chest. He must not blow with a jerk to start with, but steadily, as in inflating a football. He continues to blow, if the patient roughly equals his own size, until his own lungs are emptied. He then fully removes his mouth to a comfortable distance, using his hands as needed to maintain head-tilt, and gauging lung-emptying by sight. He repeats this breathing three or four times, as quickly as he can (but without jerking his breath into the patient) to give a good, quick supply of life-giving oxygen.

Gauging the Amount of Breath Required.

If the patient has a smaller chest than the rescuer, the latter judges the amount of "filling" by the rise of the chest. If the chest expands noticeably, his breath has reached the patient's alveoli, and his object is achieved. He will get little more air into the patient by jerking or forcing, he will lose valuable time, and he could do damage. He will do much better to stop, and quickly give the patient another lungful.

Technique for Babies.

For babies, the rescuer's mouth, widely opened to a round "O", should cover both mouth and nose. At first he should use a "cheek puff", feel for expansion, and watch for deflation. If no movement occurs, he uses a "mouth puff"—that is, blowing in, as far as he can judge, only the whole air-content of cheeks and mouth.

If no movement occurs, the rescuer checks the position of the baby's head, which is much more flexible than in older children, to make sure of full backward head-tilt. A baby's ill-developed muscles may not pull the jaw and tongue up from the larynx. It may be necessary to jut the jaw forwards. The easiest way is to hook a finger inside the lower jaw and pull the lower gum well forward of the upper gum, and hold it there while another "mouth puff" is given. Alternatively, the rescuer can use two hands, with a thumb on each side below the ear-lobes and behind the angle of the jaw on each side, and then hold it forward with fingers and thumb.

If that fails, he should use more force (but certainly not full force), gradually increasing until he feels the chest rise. If he fails, or if air goes into the stomach, it is probably because of insufficient head-tilt or jaw traction. If a small Guedel airway or "Resusitube" is available, it may help, but it will very rarely be necessary. Hanging

the baby up by the legs and smacking it between the scapulæ sometimes dislodges a foreign body. An exploring finger pushed well down to and past the larynx is quicker, either to hook it up or to push it down the œsophagus.

What To Do About Air in the Stomach.

If the rescuer feels or hears some air enter the stomach, he must leave it there, unless distension is gross. It can lift the diaphragm and reduce the range of breathing; but it will not stop the rescue breath from entering the lung, unless the abdomen is as tight as a drum. It is some breath, any breath, deep into the lung that matters. Nothing else does, until the lung has been filled.

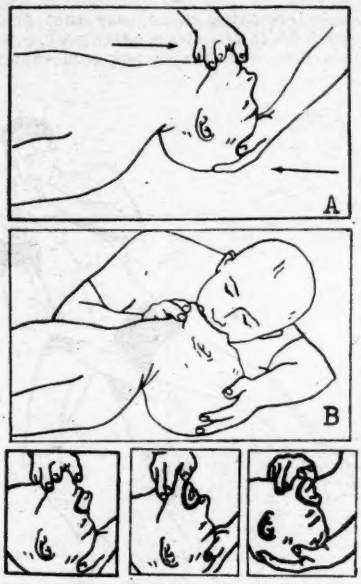

FIGURE IV.

Mouth-to-nose and mouth-to-mouth rescue breathing; see text for description. (By courtesy of Health Research, Inc., Buffalo, New York.)

If the abdomen is really tight and tense, some air must be emptied out with hand pressure on the upper part of the abdomen. The head-tilt should be only slightly relaxed (to keep the oro-pharynx below both the larynx and the nose). Stomach content will come up with the air, and without full head-tilt and shoulder-lift it will run down onto the larynx and may start another spasm.

The rescuer then turns the patient's head well to one side, relaxing the head-tilt only a little, presses the upper part of the abdomen, scoops out quickly with the fingers any stomach content that comes up, and as quickly resumes "contact position" and "rescue breathing".

When to Use Mouth-to-Mouth Breathing.

Mouth-to-nose breathing is much easier, more pleasant and more physiological than mouth-to-mouth breathing; it should always be tried first. V. D. Bear, an oto-rhino-laryngologist, states that some 2% of patients in Sydney have impermeable noses. C. A. Sara, an anæsthetist, estimates that less than 2% of infants at the United Dental Hospital of Sydney have material nose block. Up to the age of three years the average adult can include both mouth and nose of infants in his open lips. Thus the rescuer uses mouth-to-mouth breathing as soon as he finds that he cannot perform mouth-to-nose or mouth-to-mouth-and-nose breathing.

Technique of Mouth-to-Mouth Breathing.

Positioning.

At first the positions of the patient and of the rescuer are the same as for mouth-to-nose breathing.

Contact.

Keeping the hand under the patient's neck for full backward head-tilt and shoulder-lift, the rescuer transfers the upper hand from the top of the head (by encircling the head with the arm) to the patient's lower jaw, with the thumb under the point of the jaw and the index finger in front of the chin. This prevents harmful pressure of the ulnar side of the hand against the larynx. Full head-tilt usually brings the lower teeth well behind the upper teeth and prevents clenched teeth.

The rescuer now makes a large "O" of his mouth and encircles the patient's mouth, with his cheek against the patient's nostrils, and blows down into his mouth, steadily and strongly as for mouth-to-nose breathing, taking care not to lose head-tilt from pressure against his mouth.

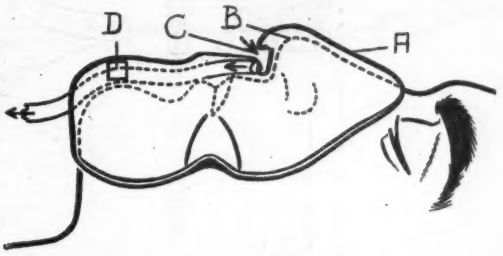

FIGURE V.

A, outline of mask; B, outline of patient's nose; C, arrows indicating direction of operator's breath; D, site of controlling spring, to be released by extension of the head.

If there is loss of air from the corners of a large mouth, the chin-up position is maintained with the ulnar fingers and the thumb and index finger are used to close the corners of the mouth.

Thumb and index finger may be needed to open the lips, or to pull the lower teeth up. In patients with full sets of teeth whose jaws are clenched, the rescuer may have to change hands, pinching the patient's nostrils with the upper hand and at the same time pushing the forehead down and back with the wrist to keep full head-tilt. The lower hand is sometimes fully occupied with forcing the jaws open. This can sometimes be more easily done by forceful pressure inwards opposite the molars. Sometimes a thumb behind each angle of the jaw just below the ear-lobes is needed to jut the whole jaw forwards, so that the lower teeth can be grasped.

The foregoing description makes it clear why mouth-to-nose breathing is tried first. Difficult mouth-to-mouth breathing may test the skill of the most expert life-saver or physician.

Pressure Needed to Overcome "Blockage with Spasm" in Drowning.

It is clear that considerable force would be necessary to overcome blockage. It could be 50 cm. of water or more in adults. The average teenager would have a force of from 80 to 120 cm. of water at the mouth (probably 70 to 80 cm. in the lung). It is now generally recognized that the negative alveolar pressure after chest compression, or by gravity-pull on lifting the thorax, would be insufficient, at about 5 to 10 cm. of water, to overcome spasm or blockage, even by the tongue.

Sara (personal communication), in spasm induced by accidental inhalation of mucus or stomach content, states

that the force he has required to exert in babies has often exceeded 30 cm. of water and has sometimes approached 50 cm. of water. He never uses more than 50 cm. in babies. The safety-valve level of 30 cm. in many resuscitators appears to me to be far too low; 40 cm. would not be dangerous even in infants, but over-zealous rescue breathing could be dangerous to small children.

Pressure Required in Other Causes of Anoxia.

Lung blockage is unlikely in carbon monoxide poisoning, but possible in electric shock. Other forms of anoxic death — as, for example, in medical emergencies, as well as in violence — could well repay basic research of the kind now being given to drowning. Intermittent positive pressure respiration could have a place in the treatment of such patients.

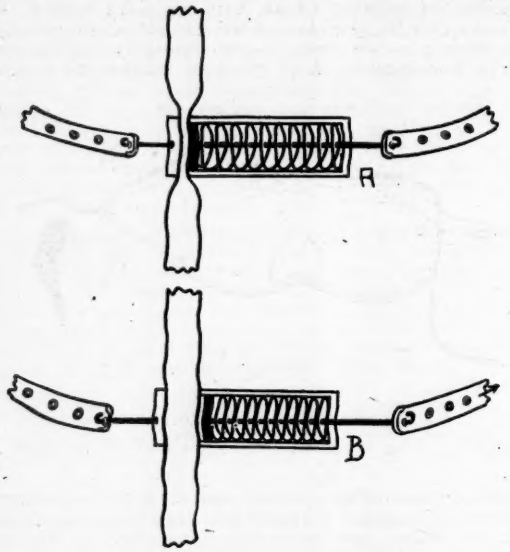

FIGURE VI.

A: Spring presses plunger against exit tube for rescuer's breath. B: When straps are tensed by extension of the head, spring is shortened, and ceases to block exit tube.

Pressure Required to "Burst the Lung".

The lung cannot be "burst" as long as its cage remains intact; but small areas of clear lung may be ruptured by distension when stretched out near a collapsed area, or a preexisting bulla may rupture. Ribs and intercostal muscles and diaphragm can resist the force of the strongest cough, up to 200 cm. of water in an adult, and 60 cm. even in a baby; but a vigorous adult can produce a localized tear in a lung if it is unevenly congested by water inhalation, and cause some bleeding or surgical emphysema.

Modifications of Chest Pressure Methods.

It is obvious that a full head-tilt is necessary to give patients the best chance of an unobstructed airway by any method of resuscitation. In the Holger-Nielsen method, this would be accomplished by reverting to the earlier method of tilting the head back vertically, with the chin resting on the hands and the face looking directly away from the body. In the Silvester method it can be done by placing a rolled blanket under the shoulders and then tilting the head back until again the face is almost vertical.

These methods have been recommended, and in simple asphyxia without spasm would be much better than traditional postures, though still unreliable.

Danger of Mass Practising of Rescue Breathing and a Suggested Remedy.

Rescue breathing, especially mouth-to-nose, is the most efficient treatment for the apparently drowned. Ruben, in Denmark, found the nose adequate in 38 of 41 cases. We have found no nose inadequate here; but all our volunteers were life-savers. Our worry was not nose-block, but infection.

In an actual rescue the victim is unconscious and cannot protest. If he could, he would obviously prefer the possible danger of tuberculosis to the certainty of death. The rescuer is safe from infection, because the patient is not breathing. In any case, no one would hesitate to save a life.

Mouth-to-nose breathing is so easy that probably 80% of people could do it effectively after seeing it explained carefully on a film; but 80% is not good enough. Actual

FIGURE VII.

Rescue breathing in water chest high. This is the easiest position of all, even easier than on land. In still water, any relative position of heads suffices, as long as the patient's head is fully extended. In rough water, the patient's head should be higher out of the water, higher relative to the rescuer's shoulder, and rotated towards the rescuer's, not looking vertically upwards. But in such a position, mouth and nose are invisible from the side.

practice on living patients is the only sure teacher, and mass practising of breathing into other people's noses or mouths means inevitable spread of many infectious diseases, from the dread tuberculosis to still-unguessed virus infections.

Our instructors and pupils alike knowingly took the risk for the sake of progress. As far as we could, we taught on the manikin (provided by Andrew's Laboratories), or used a simple sheet of "Cellophane" or a surgeon's mask, or practised in pantomime. But deep and shallow water rescue could not be perfected without many tests and real practices. In particular, the Royal Life Saving Society is indebted to Mr. Brian Colquhoun, our Chief Inspector, Mr. George Turnbull, of the Executive, and their devoted group.

In addition to the obvious danger of breath-borne infections, I believe there is danger of otitis or ear-drum damage, of sinusitis and, in the very young and the feeble, of lung injury. We had reports of "sore ears" and "bubbles in the ears" and of diaphragmatic discomfort, but none of rhinorrhœa, and all very fleeting.

Last year we issued, after test, 51,000 certificates. We aim, through the schools and otherwise, to teach the whole population; but if the whole population practised unprotected "rescue breathing", I believe more would die, in the end, from the practice breathing than from drowning. This factor is the main reason for delayed official acceptance of the method in most countries.

The plan and models for a practice mask (not to be used in real rescues) have been submitted by me to our research group and to some eminent anæsthetists, and have received approval in principle. They have been registered for patenting, in the name of the Royal Life Saving Society, New South Wales.

The mask (Figure V) covers the patient's nose and mouth snugly in contour, and has no opening into his nose or mouth; but it allows him to breathe out of the corners of his mouth, where low transverse ridges hold the mask away from his face.

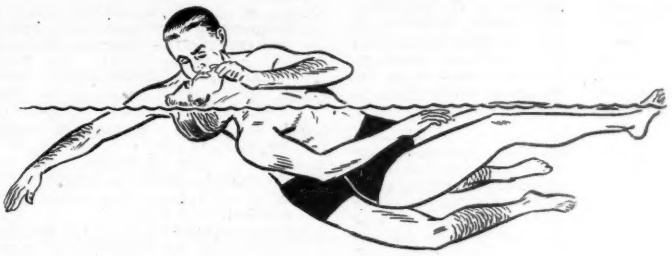

FIGURE VIII.

This sketch shows only the preparatory positions in the water. The head of the patient should be higher up on the shoulder, so that the head can be tilted backwards above the shoulder. Then in rescue breathing the faces are inclined towards each other, with the rescuer's head only slightly higher than the patient's. The rescuer does not attempt to swim fast or make a full stroke whilst doing rescue breathing, because this tends to depress the patient's head and face, and waves are apt to wash over the patient's face. In rough water rescue breathing cannot be regular, but rather as opportunity offers. The actual positions during rescue breathing are very difficult to sketch, as the mouth and nose are not in view from the side. This sketch shows both of the rescuer's shoulders too high in relation to the patient. At the moment of rescue breathing the lower supporting arm is 90° or less from the body, and the rescuer's mouth points to the tip of his own shoulder. The patient's face is somewhat rotated towards the rescuer, not facing upwards.

In front of nose or mouth, on the mask, is a shallow false chamber, also contoured to nose or mouth, with an exit for the rescuer's breath by tube to below the chin.

A spring (Figure VI) blocks the exit tube and is released only by full head-tilt. The tube is attached to a bladder on the chest. The rescuer has to obtain full head-tilt first, then he can position his mouth for mouth-to-mouth or mouth-to-nose breathing, and practise rescue breathing into the nose or mouth of the mask.

If head-tilt or mouth-seal is inadequate, the bladder will not fill; but if they are correct, the bladder signals success by filling.

The rescuer's breath cannot reach the patient's real mouth or nose at any time, and yet the rescuer can practise mouth-to-nose breathing, head-tilt and jaw-jutting, and see the inflation of "the lung" if the breathing is properly done.

Appendix: Technique of Rescue Breathing in Water.

In Shallow Water—Up to Chest Level.

The near-drowned person is held in the water, with the rescuer's left elbow (if he is right-handed) below and behind the shoulders and under the left armpit (Figure VII). His right hand pushes the chin up and fully tilts the head back. The patient's body will normally be inclined downwards in the water from shoulders to the feet, and will be almost weightless from the water displaced.

The rescuer approximates his mouth to the patient's nose exactly as described for ground rescue breathing, and with the same precautions as to being vertically opposite to the nose and not to one side. The rescuer covers the patient's mouth with his own cheek, and blows downwards (towards the crown of the patient's head as he lies in the water) into the nose, and proceeds as on land. According to the size of the patient, the left arm may need to be held higher or lower. Unless the water is too cold, this rescue breathing in shallow water will be found to be much easier than on the ground, as the buoyancy of the water removes all weight, and there is less bending over.

In still shallower water it may be easier to kneel than to stand.

In Australia, perhaps more than in most countries, many deaths occur in lagoons and in pools with wide shelving edges. In the rivers and creeks the foothold near the bank is often muddy and slippery. In many cases the banks of the creeks and rivers are high and steep, and often recurved and of loose soil. For long stretches, the bank may be hard to climb, even alone. The whole of the eastern coast has a series of shallow lagoons, which may take hundreds of yards to shelve down to deep water. An adult may be able to wade a quarter of a mile where a child would drown. The vital time saved by rescuing in shallow (waist or chest-high) water is obvious. Once practised, the ease of this type of rescue is remarkable. The mouth-to-nose method, once the idea of full head-tilt is mastered, is so easy that children can perform it, instead of running or wading for help. It is actually in such pools and lagoons that the majority of deaths occur.

In Deep Water by a Right-Handed Rescuer.

To pull the patient from depth, the usual rescue method is used, either by the hair or by both hands under the arms from behind.

If the patient is not waterlogged, on reaching the surface, he is drawn on to his back and towards the rescuer, rotated a little towards the latter and on his right (Figure VIII). The rescuer's left thumb is placed on the nearer angle of the jaw, and the fingers on the further angle, with the root of the index finger pushing the point of the chin up into a full backward head-tilt. The patient's left shoulder is supported between the rescuer's right nipple and the sternum, if both people are of even size, or higher or lower if the patient is smaller or larger than the rescuer. The patient's own drag in the water, and his weight, provide the counter-traction to force full head-tilt, if the rescuer now slowly (repeat slowly) swims with right side-stroke motion (downward pull of the right arm, and scissors kick with the legs, or a bicycle kick with alternate legs). The transverse plane of the rescuer's chest is not altogether at right angles to the water, but rather at about 45°, because the patient's weight must be borne on his chest, and it will tend to slip down under the rescuer's armpit unless the

two chests are at an angle. The patient's body is almost on its back, but rotated slightly towards the rescuer, and his pelvis and legs are directly above the rescuer's as he kicks.

The rescuer starts to tow him slowly and, with the left hand under his chin, keeps his head back-tilted and pushes him up until his mouth and nose are level with his own. The rescuer then pulls the patient's face towards him, and rotates his head with his own equally, until the patient's nose comes under his mouth. He then gives two or three quick breaths into his lung. The rescuer must be careful not to rotate his own body, but rotates both the patient's head and his own—his own 45° towards the patient, the patient's 45° towards his. The rescuer continues swimming slowly, and then breathes into the patient's lung as conditions allow. In quite still water, it is possible to breathe every five seconds, but regular breathing is not necessary, and is impossible in rough water or surf. After any long pause, three quick breaths should be given at the first opportunity.

Warnings.

1. The rescuer should not try to swim quickly, or reach the right arm out fully, else the water rushes over the patient's head and nose, and may induce further spasm, if water is blown in during rescue-breathing. If the patient's head rides too low, the speed of the kick and arm movement (more or less) should be adjusted, so that the rescuer remains at an easy slope for swimming. Then the patient's whole body is rotated a little more above the rescuer's; that brings his nose level with the rescuer's mouth.

2. Occasionally (but rarely, in life-savers' experiences) the patient's chest is quite empty of air. In such a case the body is very heavy, and the foregoing technique is unsuitable (unless an inflated "rescue tube" has been clipped around his chest). In such "waterlogged" patients, it will be necessary for the rescuer to get his left arm fully around the patient's neck on his left so that the back of the left hand or thumb can tilt the head back over the rescuer's left shoulder by pressure under his chin. The rescuer then adducts his left elbow and shoulder towards his own face, and so rotates the patient's shoulder and head in front of his own. He rotates his own head until his mouth meets the patient's nose. (The rescuer is still swimming a modified slow right side stroke, but almost on his back.) A full head-back tilt must, of course, be maintained, and the rescuer may need to give momentary assistance for this with the right hand. As in deep-water rescue work of all types, a "rescue belt" clipped on at first is a great help.

This manœuvre keeps the head much higher out of the water, and is the original method advised. It can be done easily, if the rescuer swims very slowly; but the patient's weight brings the latter's own body-length almost vertical, unless he is a powerful swimmer. The right arm must be kept moving with a "downward pull", and there must also be a scissors or bicycle kick with the legs, to maintain some slight forward movement, else both bodies tend to become vertical. But the swimming movements must not be hurried.

3. Whilst doing the rescue breathing, the rescuer must not set his mind on reaching shore. He must concentrate on maintaining just enough way to keep the two bodies in relative position. His objective is to break the blockage in the patient's lung, and not to get him ashore. When his lungs have been filled three or four times, he is safe for several minutes, and the rescuer can think about shore. A weak swimmer will quickly exhaust himself unless his swimming action is little more than treading water. If those first three breaths overcome the blockage, they carry oxygen to lungs and brain, with recovery, in place of death.

A word of warning is necessary: in practising without the mask described (which is not yet in commercial production), it is imperative not to blow into nose or mouth with a jerk. Slow, long breaths are advised, like blowing up a football. Jerky or sudden puffs catch the Eustachian tubes unprepared, and painful ears result. In an actual rescue the air should be got in quickly, at the first opportunity, regardless of other consequences.

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"TOFRANIL"—A NEW ANTI-DEPRESSANT DRUG.

By ALAN STOLLER,

Chief Clinical Officer, Mental Hygiene Authority, Victoria.[1]

THE drug treatment of depression is coming more under notice. Drugs such as the amphetamines ("Benzedrine", "Methedrine", "Dexedrine"), although sometimes useful in milder depressions, act transiently, are habit-forming and may produce undesirable cerebral over-activity. "Ritalin" and "Meratran", which are mild cerebral stimulants, are doubtfully of use in less severe reactive depressions. Tranquillizers, such as chlorpromazine, may diminish the agitation associated with depression, but do not affect the latter; reserpine may actually provoke depression. A group of monoamine oxidase inhibitors, related to nicotinic acid (for example, "Marsilid", "Nardil", "Catron"), have latterly been shown to have anti-depressant properties, and the two last-mentioned, which are said to be less hepatotoxic than "Marsilid", are currently being evaluated by us. It is suggested that these are useful in atypical depressions (Kalinowsky, 1959), in contradistinction to "Tofranil" (synonyms, imipramine, "G22355"), which acts more specifically in endogenous depressions. "Tofranil" is related to the phenothiazines, especially promazine ("Sparine"), and was introduced into Australia for clinical trials at the end of 1958. The present paper deals with the action of this drug, and evaluates its effect in a pilot study on 80 patients.

Properties of "Tofranil".

"Tofranil" is designated as N-(gamma-dimethylaminopropyl)-imino-dibenzyl hydrochloride, with the formula shown in Figure I.

Animal studies (Azima and Vispo, 1959; Van Meter *et alii*, 1959) suggest that the drug may act through its sedative action, through a diminished central arousal

[1] From the Mental Health Research Institute, Parkville, Victoria.

reaction and through the counteraction of cortical inhibition. In humans tolerance does not develop, and the drug is reported to be non-euphoriant and non-addictive (Azima and Vispo, 1959).

Evaluation of Therapy.

Improvement Rate.

Of the total of 80 patients, 19 (24·0%) were markedly improved, 24 (30·0%) were moderately improved, 18 (22·0%) were mildly improved, and 19 (24·0%) were not improved. Of these last, six could have been described as worse, though this would not necessarily be due to "Tofranil".

Diagnostic Categories.

The 80 patients were classified as suffering from the following: psychotic depression (34); severe neurotic depression (19); schizo-affective psychosis (12); moderate neurotic depression (10); alcoholic psychosis with depression (2); organic psychosis with depression (2); senile psychosis with depression (1).

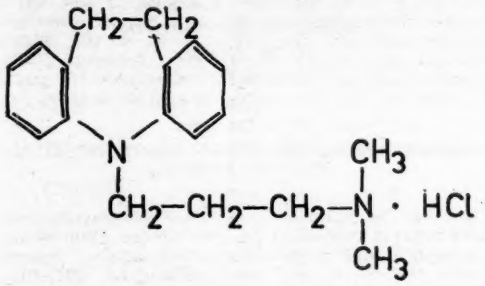

FIGURE I.

Response to treatment was most favourable in patients with psychotic depression (67·6%) and severe neurotic depression (63·1%)—conditions which normally respond better to electro-convulsive therapy. In cases in which the depression was accompanied by schizophrenic symptoms or by organic change, the response to "Tofranil" was relatively poor (only 17·6% of the patients showed even a moderate improvement).

Locale of Patients.

Of the 80 patients, 46 came from out-patient clinics, 14 from an early treatment hospital and 20 from long-stay hospitals. Patients from the out-patient and early treatment units showed an improvement rate (marked and moderate) of 63%, as compared with 25% from the long-stay hospitals.

Sex.

Males numbered 30 and females 50. Although the improvement rate for males was 63%, as compared with 48% for females, the difference was not statistically significant.

Age Distribution.

Of patients aged over 40 years, 59% showed moderate or marked improvement, as compared with 45% of those aged under 40 years. The difference, again, was not statistically significant.

Dosage.

With doses up to a maximum of 200 mg. per day, 52% of patients were improved, as compared with 55% of patients taking doses of more than 200 mg. daily. It would therefore seem that a maximum dosage of 200 mg. per day is sufficient for most patients. Of the 80 patients, 75 had maximal doses of between 125 and 400 mg. daily. Oral therapy was combined with parenteral therapy in 24 cases, without any special benefit being noted.

Side-Effects.

Side-effects were reported in 37 patients (46%). Whilst not generally severe they were still of considerable nuisance value and had to be carefully considered in managing the patient. Increased psychomotor activity was noted in 16 patients (20%), the symptoms observed including tremor, agitation, irritability, insomnia, tension and, in one case, hallucinations of sight and hearing. Cardio-vascular effects were reported in 15 cases, mainly in the form of giddiness, tachycardia and postural hypotension; two patients complained of "hot flushes". Gastro-intestinal side-effects were next in frequency (11 patients), mainly in the form of dry mouth, though this was often associated with nausea and occasionally with anorexia, vomiting and constipation. Visual side-effects, in the form of blurred vision and dilated pupils, were found in five cases. Erythematous rashes were seen in two cases. Decreased psychomotor activity, in the form of sleepiness, transient weakness and poor coordination, was noted in two cases. Three patients attempted suicide, one successfully, though it is doubtful whether "Tofranil" contributed in any way.

Discussion.

"Tofranil", a new type of anti-depressant drug, constitutes a definite advance on previous anti-depressant drugs. It does not produce tolerance and has not, so far, indicated that it is likely to be addictive. It is classified as a thymoleptic (mood-changing) drug, though the relatively frequent increase in psychomotor activity, in 15% to 20% of patients, gives grounds for classing it as psycho-analeptic (Delay *et alii*, 1959).

Parenteral administration seems to offer no special advantages. It seems appropriate to commence with a dose of 75 to 100 mg. per day and work up to 200 mg. per day, or up to a dose that produces a satisfactory response, and then reduce the amount to a maintenance dose, usually about 100 mg. per day. It may occasionally be necessary to exceed a dose of 200 mg. per day. Each patient needs to be treated individually in terms of side-effects, time-lag for therapeutic response (three to 30 days or more), development of manic symptoms, threat of suicide or failure to respond. Careful consideration should be given to continuing therapy in those who have failed to respond in four weeks. When improvement occurs, maintenance therapy, for optimal effect, needs to be continued for three to six months, and at the time of cessation must be estimated by trial and error. Administration of the drug may be continued through the expected duration of a recurrent depressive attack, or it may be given at the time of a regular premenstrual or seasonal onset. It may be used to maintain an improvement resulting from electro-convulsive therapy. It potentiates electro-convulsive therapy, so that prior administration reduces the number of treatments needed. Only small doses should be used for elderly patients suffering from arteriosclerosis.

Improvement is manifested by an increase in drive and a reinvestment of energy from internalized super-ego to the world outside. Aggression is able to be mobilized and discharged.

As has already been stated, in the Victorian Department of Mental Hygiene, 68% of patients with psychotic depression and 63% of those with severe neurotic depression showed moderate or marked improvement. The inclusion of long-stay mental hospital depressives has undoubtedly reduced the improvement rate so that, when these are excluded, the rate of improvement would have been higher. Hoff (1959) claims an 80% recovery rate in milder endogenous depressions. Kiloh (1959), in a controlled study, showed a recovery rate of 74% in endogenous depressions and 59% in reactive depressions, as compared with placebo responses of 27% and 25% respectively. In our series, no significant sex or age differences were noted, although some authors report better results in females and a less satisfactory response with increasing age.

When our own experience and a review of the literature are combined, the following would seem to be the clinical

factors in the use of "Tofranil": (i) best results occur in patients with milder endogenous depressions; (ii) good results also occur in patients with severe neurotic depressions; (iii) in manic-depressive disorders, its effect is less in proportion to the existence of manic features; (iv) when depression is associated with schizophrenic symptoms, organic cerebral disease and epilepsy, a poor result is to be expected; (v) neurotic symptoms are relieved only insofar as they are secondary to depression—pure anxiety reactions are not relieved; (vi) "Tofranil" may have a role to play in the relief of pain, especially where a depressive component exists (Brothers, 1959), and it may also be useful for alcoholics whose drinking is secondary to depression; (vii) it may have a place in follow-up therapy after electro-convulsive therapy or in the prevention of recurrent depressions.

Electro-convulsive therapy, in our present state of knowledge, must still remain the treatment of choice for severe depressions. It is more rapid in its effect, has a more certain action and demands less time from the doctor. "Tofranil" has many more side-effects and has to be administered for long periods. However, it already has a definite role in cases in which tablets are more acceptable to the patient and his relatives than electro-convulsive therapy, in which the patient becomes confused with electro-convulsive therapy, in which the patient is resistant to electro-convulsive therapy, and in which the patient's work involves intellectual tasks. Some out-patient clinics are reporting greatly decreased need for electro-convulsive therapy. However, the extent to which "Tofranil" should replace electro-convulsive therapy has still to be worked out. It still has to be determined whether it is useful as a preliminary treatment or is needed for continuation therapy, whether it will prevent recurrences, and whether it can be used to affect depression whilst tranquillizers deal coincidently with anxiety components.

Side effects, although occurring in some 50% of patients, are not ordinarily severe. Reduction of dosage, or the coincidental use of tranquillizers for anxiety and tension symptoms, can control most of these. However, watch needs to be maintained for the possible development of hypomanic or manic attacks, an hallucinatory syndrome or attempted suicide. For these reasons, careful supervision as well as an adequate knowledge of the natural history of depressive illnesses is required if untoward consequences are to be avoided. "Tofranil" does not, therefore, seem to be a drug which should lightly be prescribed in general practice.

Summary.

1. The properties of "Tofranil", a new anti-depressant drug, are described.

2. The results in a pilot study of 80 patients treated in the Victorian Mental Hygiene Department are presented.

3. The dosage and indications for its use are discussed.

4. Despite side-effects, "Tofranil" is a drug of great promise in the treatment of depressions, formerly responsive only to electro-convulsive therapy. Its exact relationship to electro-convulsive therapy has still to be worked out.

5. Because of the possibility of occasional suicide, a swing-over to mania or hypomania, or the development of an hallucinatory syndrome, care should be exercised in using this drug.

Acknowledgements.

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OUT-PATIENT TREATMENT OF DEPRESSION WITH IMIPRAMINE ("TOFRANIL"): A PRELIMINARY REPORT.[1]

By R. E. G. MACLEAN,
Psychiatrist Superintendent,
C. H. NOACK,
Medical Officer,
AND
G. L. CHRISTIE,
Psychiatrist, Observatory Clinic, Department of Mental Hygiene, Victoria.

"TOFRANIL" is, chemically, N-(3'dimenthylamine-propyl)-imino-dibenzyl hydrochloride, resembling chlorpromazine ("Largactil") and, more closely, promazine ("Sparine"), but with the –S– in the latter replaced by $-CH_2-CH_2-$ in the ring structure (Figure I). It is known also as "G22355", and its approved name is imipramine.

That it is safe to use, in spite of some side effects, is clear from the papers by Roland Kuhn (1957), who states that "the toxicity of the substance . . . is of about the same order as that of promazine".

Its value in depressive states has been stressed by a number of workers—especially at the McGill University Conference on Depression and Allied States, 1959 (*Documenta Geigy*, 1959).

Present Study.

This account sets out the results of treatment with "Tofranil" of 52 patients, of whose illness depression was a marked feature. All were treated as out-patients, and were selected for treatment as they presented with depressive features. Success or otherwise with "Tofranil" treatment was based on observation of the patients, on the statements of the patients themselves and, in some cases, on statements from relatives and friends of the patients, as well as from other members of the clinic staff. It was noteworthy that a few patients, whilst they did not themselves claim any benefit from the treatment, were nevertheless observed to be more cheerful, animated and responsive, and to give an account of greater achievements and activities in the course of their daily lives. It was also noteworthy that the type of patient presenting as apparently suitable for "Tofranil" treatment rather than any other form of therapy (except electro-convulsive therapy) characteristically suffered from such depression that the depressive symptoms could no longer be ameliorated to any marked extent by psychotherapy, and that no more than transient improvement resulted with any other drug.

The investigation into the effects of "Tofranil" was carried out along largely independent lines by the three of us, and the results presented are a synthesis of our experiences.

[1] This preliminary report was made possible by the supply of a generous amount of "Tofranil" by Geigy Pharmaceuticals, whom we thank.

Regime.

Although the drug can be administered by intramuscular injection, in this investigation it has been administered orally in tablets of 25 mg., except in one case, in which intramuscular injections were used in the first week. The results appeared no better than in the other cases.

The dosage schedule varied. One regime, carried out in 10 cases, was to give 50 mg. three times daily from the outset, occasionally lowering this to 25 mg. three times daily when improvement resulted, and nearly always giving a maintenance dose. Another pattern, used in a group of earlier cases, was to give 25 to 50 mg. four times per day from the outset, but then to administer the drug according to the clinical condition rather than in terms of a regular maintenance dose; later in this series of 15 cases, higher doses were given, with gradual increases, followed by gradual decreases if improvement resulted. The third regime in nearly all of the 27 cases involved the administration of 25 mg. three or four times per day, increasing the dose by 25 mg. per day to a daily maximum of 300 to 400 mg., with a gradual decrease at the same rate on improvement, and a maintenance dose for most patients.

On analysing the various dosage schedules, it appeared that the best procedure was to start with a very small dose given orally, to minimize side effects, to increase this gradually till a good result was obtained, and then gradually to decrease the dose to the minimum that would maintain improvement. (The drug was discontinued if failure became obvious after four to eight weeks.)

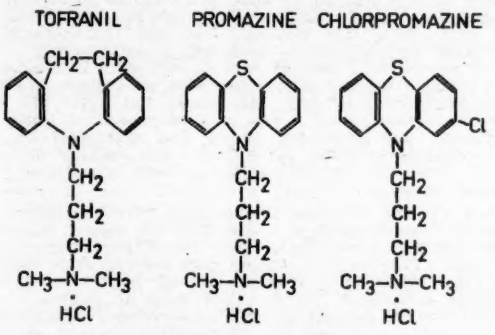

FIGURE I.

Maintenance Dosage.

Maintenance dosage was not necessary in cases of depression that were definitely episodic. For many patients, a 'maintenance dose" seemed desirable if improvement was to be maintained. This averaged five tablets per day in this series; but a lower dose will probably be found adequate as time passes, and as more experience with this drug is gained.

Results.

General.

The effect of treatment of 52 patients suffering from a depressive state was recorded as follows:

Very marked improvement	16 patients
Marked improvement	17 patients
Some improvement	5 patients
Improved, cause doubtful because of multiple treatment	5 patients
Unchanged	6 patients
Worse	3 patients

It can be said, then, that 38 of 52 patients improved with regard to their depressive state.

Rapidity of Improvement.

The degree of improvement in 36 of the patients who did improve could be assessed in terms of the time of onset of improvement.

Improvement within one week	7 patients
Improvement within two weeks	16 patients
Improvement within four weeks	7 patients
Improvement within eight weeks	6 patients

In the majority of cases, improvement was gradual and continuing, so that the foregoing figures are only approximate. Also, as the patients were seen as out-patients, usually fortnightly (and then they did not always keep appointments), the precise time of onset of improvement was often hard to assess. If closer observation had been possible, it is likely that the onset of improvement would have been earlier than is indicated above.

Sex Differentiation.

Forty women and 12 men were treated. On separate examination of the results obtained for males and those obtained for females, it was found that of the men, 4 out of 12 did not improve (33%), and of the women, 10 out of 40 did not improve (25%). Although the numbers are small, this series suggests that "Tofranil" may be more successful with women than with men. This has also been suggested by Roland Kuhn (1957).

We believe that there is no evidence that "Tofranil" has, of itself, a greater degree of effectiveness with women than with men. It should be remembered that women are physiologically more prone than are men to cyclothymia and periodic depression, that they have less compulsion to continue in paid employment, and that women who are not employed outside the home live during the day comparatively solitary lives. These conditions affecting women are conducive to depression, while it could be held also that women are more easily able to consult psychiatrists. Men, typically, must continue working unless severely depressed, and only at later stages are likely to take the same step. These are factors that must be considered in any observation of the differential response to treatment of men and women.

Side Effects.

Side effects were present to some extent in approximately 50% of cases. While those complained of or observed were numerous and covered a wide range of symptoms, a high majority of them could be classified as (i) atropine-like effects, or (ii) effects due to increase in tension, either psychic or psychosomatic.

Often several side effects occurred concurrently in a patient, but in nearly all cases they were present only in the first few days of treatment. In order of frequency, they were as follows: dryness of the mouth or throat (sometimes with excessive thirst), nausea, giddiness, sweating, agitation or excitement, feelings of tension or irritability or of hotness (rarely with hot flushes), failure of accommodation, vomiting, various rashes, and (each in one case only) sleepiness, feelings of "heaviness" or "detachment from the environment", incoordination of hand movements, palpitations, enlarged pupils, constipation, cessation of frequency and incontinence of urine, hallucinations, and minor mental disturbance.

None of the side effects were in themselves serious (to the extent of being unresponsive either to treatment or to temporary lowering of dosage), and the only ones that persisted for more than a few days were dryness of the mouth (which was frequent) and cessation of frequency of micturition. All the others waned in a few days without, in most cases, lowering of dosage. To those patients with nausea and vomiting, it had to be stressed that the tablets must be taken only after an adequate meal (a glass of milk was found useful by two patients in lessening these symptoms). For nausea and vomiting, tremors, tension, irritability, agitation, excitement, giddiness, sweating and palpitations, the addition of small doses of one of the phenothiazine derivatives, such as "Largactil", "Trilafon" and "Sparine", was unusually helpful.

A few patients stopped treatment permanently or temporarily because of side effects. In retrospect, most of these appeared unsuitable for this treatment as being too tense, too prone to attacks of panic, or too hypochondriacal.

As the series progressed, it was found that side effects became fewer, less severe and less troublesome as we used smaller commencing doses and increased the dose more cautiously, and also became more aware that many side effects were related to preexisting psychic or psychosomatic tension, and were more likely to occur in the patient who was hypochondriacal. No patients with symptoms resembling Parkinsonism were observed. We feel strongly that if the same patients were treated again for similar conditions, with the knowledge we have gained, the incidence of troublesome side effects could be lowered considerably.

One rash was of considerable interest. It occurred after about two weeks of "Tofranil" therapy, while the patient was concurrently taking subcoma doses of insulin. This was generalized severe urticaria, responding to antihistamines, and not recurring when the brand of insulin was changed. The insulin batch was checked, and we were told by the manufacturer that no similar experiences had been reported from that batch.

Kielholz and Battegay (1958) report similar conditions due to concurrent treatment with insulin and "Tofranil".

Reports of Cases.

CASE I.—This was a case of recurrent endogenous depression. The patient was a woman of 40 years, who was referred for electro-convulsive therapy. She said that she had been depressed and worried for six months, and that she had first become depressed and tense before the age of 10 years, in an episode which lasted for months. The depression had recurred yearly, or more often, ever since. In between attacks she was excessively cheerful—she stated that there had been "never any normal phases that I can remember". She has had many course of "Cardiazol" and more recently has undergone electro-convulsive therapy several times each year, but she always became so excited after treatment that she was, in her words, "an embarrassment to her husband". She was anxious to avoid electro-convulsive therapy, and "Tofranil" was given—one 25 mg. tablet four times per day—the dose being increased by one tablet per day. When examined a week after treatment had commenced she looked normal (she had appeared very depressed and anxious when first seen), and said that after four days on "Tofranil" she had "felt almost normal for the first time since girlhood". She was seen frequently for four months, and had, she said, continued to improve up till about the third week of treatment; and she remained "perfectly well" after that, although taking no "Tofranil" in the last month.

CASE II.—This case, also of recurrent endogenous depression, occurred in a male patient, aged 51 years, who had been moderately depressed for 20 years, with acute exacerbations of severe depression coming on within a day several times a year, and causing him to leave his employment. He had undergone electro-convulsive therapy frequently with temporary relief—up to six courses per year. He was started on "Tofranil" therapy, a dose of 100 mg. four times per day, when very depressed, but not, from the observation of the psychiatrist consulted, at his lowest ebb. Within two weeks he had become much more cheerful and was complaining less. His dose of "Tofranil" was gradually decreased to 150 mg. per day. He has slowly improved over the five months of treatment so far, and has continued constantly at his employment, gradually becoming more sociable, cheerful and spontaneous, and showing more initiative. There were no side-effects apart from tension and tremors in the first few days.

CASE III.—This case, one of obsessive compulsive phobic neurosis, occurred in a single woman, aged 31 years, who had had for about five years phobias relating to being alone with men after dark, and had developed an unreasoning fear of sexual attack by her father. This had forced her to live away from home, and she had gradually withdrawn from social activities; as a result she had become almost friendless, and recently, markedly depressed. She had undergone electro-convulsive therapy and taken subcoma insulin therapy and many stimulant, sedative and ataractic drugs, with no appreciable effect. Psychotherapy for a year had increased her insight, but had not diminished her obsessive fears. She was given "Tofranil" 25 mg. taken orally three times daily, and the dose was increased by 25 mg. per day up to a maximum of 300 mg. per day. In the first few days she was nauseated, and vomited occasionally after a dose unless she took milk with it. She was sweating freely, and in the second week had a treatment rash that resembled rubella, without other symptoms of this disorder. By the end of the second week the rash and all side-effects had passed, and she was much more cheerful, much less phobic and panicky, was going out a lot at night, and had "no feelings of hysteria now". The dose of "Tofranil" had been reduced to about 150 to 250 mg. per day while she was experiencing side-effects: then, after she had been taking 300 mg. per day for two months, this was gradually reduced to 150 mg. per day. Treatment was continuing after four months, and she maintained that she was still improving. She certainly looked progressively better. She was going out often at night and had many friends and social activities. Traces of the obsessive fears remained, but were not conspicuous, and she "could laugh them off".

CASE IV.—This was a case of recurrent depression with hallucinosis due to treatment. A married female patient, aged 68 years, had been seen frequently for two years because of severe recurrent depression, lasting many weeks, and occurring about each six months for 28 years. She had taken "Cardiazol" and undergone electro-convulsive therapy without improvement, and now refused the latter. She obtained slight transient help from "Dexedrine" and "Meretran", and relief of both tension and insomnia from "Plegicil". She was given "Tofranil", 25 mg. taken orally four times a day after meals, and this was increased by 25 mg. per day to a maximum of 300 mg. per day. After three days she was less depressed, but still found it hard to concentrate. When examined after 13 days she was cheerful, but had been screaming during her sleep, was "losing her balance", and was passing less urine, although she had had marked frequency of micturition before; she was over-energetic and giddy and had hallucinations of sight and hearing. She could hear "a band playing, a choir singing", and said: "I wanted to join in and sing." She could see things moving on the floor, for example, "a mousetrap—looked as if it had an octopus, not a mouse in it—but an octopus as big as a mouse is to an elephant", but "when she got near, there was nothing there but the mousetrap". "Tofranil" therapy was stopped, and in view of her hypomanic condition, a dose of lithium carbonate in a dose of five grains three times per day was prescribed. In five days more she was very well indeed, but again had frequency of micturition. She was very pleased with the treatment, and had been in no way distressed by the hallucinations or other side-effects. Her hallucinosis suggested gross over-excitation, rather than a toxic or confusional state.

CASE V.—The last case is one of reactive depression. A married woman, aged 31 years, and her family had been attending the clinic for a year about her children and husband. The husband suffered very severely from asthma, and they had three young sons—all hyperkinetic, with multiple behaviour disorders and hard to control. She herself had, in the last six months, developed mild asthma, a peptic ulcer syndrome and premenstrual tension, and was "always screaming at the boys". Under these circumstances she became very depressed over several months, bursting into tears easily and sleeping poorly, and she was no longer a person with whom matters could be discussed reasonably. Her depression, in short, had become psychotic in quality. She was given "Tofranil" orally, 25 mg. three times daily, with an increase of 25 mg. per day. She continued on "Largactil", 25 mg., or two or three tablets as indicated. When seen 16 days later she was much more cheerful—almost at her best for the year. She had had a very dry mouth when the dose reached 225 mg. of "Tofranil" per day, and had stopped taking it. Improvement began on the sixth day. There was no appreciable change in her family to account for her improvement. Three weeks later she was just as depressed as before, again without appreciable change in the family's health and behaviour. She was again started on "Tofranil", but in smaller dosage, increased more cautiously.

Discussion.

Since this is a preliminary report to which limited space can be given, it is desirable to postpone discussion of the relative merits of "Tofranil" and electro-convulsive therapy, maintenance dosage, "Tofranil" in relation to psychotherapy, dependence on the drug etc.

Summary.

1. The out-patient treatment of depressed patients with "Tofranil" given orally is discussed.

2. It appears, from this series of cases, that "Tofranil" is a potent anti-depressive of a new type, effective in many cases of depression that had been resistant to chemotherapy and electro-convulsive therapy.

3. For out-patient depressives, "Tofranil" treatment can replace electro-convulsive therapy to a large extent.

4. "Tofranil" has not been found to have any serious or dangerous side effects.

5. Side effects and methods of combating them are discussed.

6. It appears that women may respond to "Tofranil" therapy appreciably better than do men.

7. It is not clear from this study whether "Tofranil" should be given continually to patients subject to depressive episodes, or whether it should be given only episodically.

8. Our conclusions are based on an out-patient study only; the picture may be considerably different for those patients who need to be admitted to hospital.

9. These conclusions are only tentative; we believe that investigation over at least a further year is needed for accurate assessment of this drug.

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Reports of Cases.

CHLORDANE POISONING FOLLOWING PROLONGED USE FOR ANT CONTROL AT A PRIVATE HOME.

By G. SELBY, M.R.C.P., M.R.A.C.P.,
Honorary Assistant Physician, Royal North Shore Hospital of Sydney,

AND

A. T. JONES, B.Sc.,
Scientific Officer, Division of Industrial Hygiene, N.S.W. Department of Public Health, Sydney.

Malathion.

MALATHION, or 0,0–diethyl dithiophosphate of diethyl mercapto succinate ($C_{10}H_{19}O_6PS_2$) is one of the more recently developed organic phosphate insecticides. It is considerably less toxic than the earlier types such as parathion. The median lethal dose of the former for man has been estimated at well above 2000 mg.,[2] and of the latter at 20 mg.[10] The corresponding figures for rats are respectively 500 to 2000 mg. per kilogram, depending on the nature of the solvent,[1] and 3·6 to 13 mg. per kilogram.[6]

Malathion can be both an acute and, more rarely, a chronic poison. It may be absorbed by ingestion, by inhalation and, less readily, through the intact skin. In acute poisoning, arising from gross over-exposure or intent, absorption leads to inhibition of cholinesterase enzyme, resulting in symptoms and signs of organic phosphate poisoning. These are typified by blurred vision, usually accompanied by pin-point pupils, salivation, dizziness, weakness, nausea, headache, sweating, loss of reflexes and sometimes cramps and convulsions.[10] When 5000 p.p.m. of a 90% grade of malathion were added over long periods to the diet of albino rats, apart from failure to gain in weight as rapidly as the controls and the presence of slightly reduced cholinesterase levels, there were no abnormal findings.[1]

Few cases of malathion poisoning have been reported in the literature. Recovery from toxic doses is known to be rapid. As this insecticide had last been used by the patient in the case to be presented some three months before the onset of his illness, it was considered unlikely to be the cause. This was confirmed by the normal cholinesterase activity of his blood sample.

Chlordane.

Chlordane, or 1,2,4,5,6,7,8,8–octachloro–3a,4,7,7a tetrahydro–4,7 methanoindene ($C_{10}H_6Cl_8$), was used by the patient virtually every day of the 10 weeks or so preceding his illness. He was endeavouring to control ants at his home, and had sprayed all around it three or four times in that period, as well as inside some of the rooms.

Chlordane is classified as a chlorinated hydrocarbon insecticide. It is one of numerous synthetic chlorinated compounds developed for pest control work, after the earlier success of DDT in many fields. Technical chlordane is defined as "a commercially produced chemical containing 60 to 75 per cent of chlordane, together with 25 to 40 per cent of related compounds occurring in the natural manufacturing processes and which are toxic to insects".[1] In its early production it contained some unreacted hexachlorocyclopentadiene, which was thought greatly to enhance the toxicity of the technical product.[8][14] Today, as a result of more refined methods of production, it is possible to reduce considerably the presence of this and other chlorinated impurities, with a consequent reduction in the overall toxicity of the insecticide.

Technical chlordane is an amber liquid, which has a molecular weight of 409·8, boils at 175° C. (2 mm. pressure) and is appreciably volatile.[1][3] It is insoluble in water, but miscible with almost all organic solvents. An 80% concentrate, as water-soluble emulsion or for solution in kerosene, is usually manufactured for sale. Instructions for dilution of the concentrate to spray strength are printed on the label.

Chlordane is rated as being less acutely toxic than DDT. For chronic exposures the reverse is the case; this is reflected in the American tolerance values for residues in foodstuffs, which are 0·1 p.p.m. for chlordane and 7 p.p.m. for DDT.[11] This insecticde can be absorbed by ingestion or inhalation or through the skin. The acute median lethal dose is estimated at 500 mg. per kilogram of body weight.[1] Dogs fed chlordane at 5 p.p.m. in the diet exhibited detectable toxicity after 15 months.[1]

In New South Wales, the major uses of chlordane are in the control of (*a*) borers—when it is frequently used at a concentration of 0·5% to 1% in combination with 10% to 20% dichloroethyl ether, and (*b*) carpet beetles, silverfish or ants—in these cases a 1% to 2% solution is used.

During the last eight or nine years, the Division of Industrial Hygiene of the N.S.W. Department of Public Health has been especially interested in poisonings resulting from the use of insecticides, fungicides and weedicides. One employee suffering from chemical pneumonitis, of which the earlier unrefined chlordane was the causative agent, was seen by one of us (A.T.J.) in 1952. This person was a professional pest-control operator, and had

handled chlordane for only a short period. On the day when he was affected he had been spraying inside kitchen cupboards, which necessitated his head being in a relatively confined area. The victim neglected to wear his respirator. Several hours after finishing work, he noticed some difficulty in breathing and was sweating. The next morning he reported to the Division, still with tightness in the chest. As the effect was relatively mild, he was put off work for several days, during which time he recovered. Later in the same year, a medical practitioner supplied details of a second patient who spent several days in hospital with similar symptoms and made an uneventful recovery. Since the improved formulation has been available, with the exception of that under discussion, no further cases have come to the notice of the Division.

The number of chlordane poisoning cases reported in overseas industrial medical literature is not large; these have mainly resulted from intentional swallowing or carelessness. Brief details are as follows.

A woman, aged 33 years, was in hospital for four days after having slept in a closed room in which 1% to 2% chlordane solution had been sprayed. She awoke with severe coughing and vomiting. Examination revealed damage to the kidney, liver and hæmatopoietic system. These findings were consistent with the results of animal experiments.[6]

A child was accidentally sprayed about the head and neck with a 2% chlordane solution. In spite of being thoroughly washed, within an hour the child became hyperirritable and cried for 30 minutes.[10]

A child, weighing 9 kilograms, drank a mouthful of chlordane solution. The amount ingested was less than 100 milligrammes. Gastric lavage was performed, but not immediately. Three hours after ingestion, a generalized tremor developed, and the child became incoordinate and ataxic. Convulsions followed, but were brought under control with ethyl chloride inhalations. They recurred two hours later, but were again controllable. Respiration was shallow and irregular for eight hours, and did not revert to normal until some five hours later. The ataxia and irritability progressively diminished, and finally disappeared after two or three weeks.[7]

A suicidal ingestion of chlordane by a young man was reported in 1955. He died during generalized convulsions.[8]

On the industrial side, no abnormalities due to chlordane have been reported. Indeed, in a study of 22 workers employed in the manufacture of chlordane, "Dieldrin" and "Aldrin",[12] in spite of occasional exposures up to 54 mg. per cubic metre of air, no deviation from normal was found in any worker. The standard concentration for exposure to chlordane is 2·0 mg. per cubic metre of air.[13] It is of interest that, in some cases of poisoning by "Dieldrin" and "Aldrin", which are related but more toxic compounds, electroencephalographic changes have occurred.[9,11]

The recorded symptomatology of chlordane poisoning includes, in both humans and animals, liver damage (chronic cases), inanition, ataxia, convulsions, paræsthesiæ and collapse. It is possible to extract chlordane from the subcutaneous fat and estimate the amount present.

Clinical Record.

Early in 1958, one of us (G.S.) asked the Division of Industrial Hygiene of the New South Wales Department of Public Health to estimate the cholinesterase activity level of a sample of blood taken from one of his patients in hospital, thought to be suffering from over-exposure to two insecticides, malathion and chlordane. The affected person, an engineer by profession, aged 35 years, used chlordane, one teaspoonful to a pint of water—which is approximately 0·5% final concentration—in a continuous hand spray apparatus. The insecticide was used for 10 weeks at an average rate of one pint per day, usually in the evenings. The spray gun used gave a relatively fine mist. During some mixing the bottle was occasionally sniffed, but not for any partcular reason. All around the outside of the house was sprayed three or four times during the period under discussion. Fences were also sprayed, sometimes at head level, but mainly downwards. Inside the house, three rooms, one of them being the bedroom, were similarly treated at floor level to a distance of six inches out from the walls. In addition to this, the patient sprayed around the sink in the kitchen and the lower cupboards; in the latter instance he took care to keep his head outside the confined space. The smell of insecticide was noticeable throughout all this work. The patient said that skin contamination occurred at various times, but was uncertain of the extent. The majority of spraying, on all days, was directed downwards away from the breathing zone. It is not known just how much chlordane was inhaled or absorbed through the skin during the application period. No analysis on subcutaneous fat was made.

On the day when he became ill, the patient worked hard in his garden; he had last sprayed two days previously. After a hot dinner he felt nauseated and vomited; he had no evening meal, and only a very light breakfast the following morning. While at work that day he first felt pains in his chest. At this stage the patient became alarmed, and was examined by his local medical practitioner in his home. By this time he complained of itching, pain and burning paræsthesiæ over the front of the right side of his chest and between the shoulder blades. Three days later the painful paræsthesiæ extended over the right half of his trunk, and he felt generally ill. He went to work, but had to leave after one hour, by which time the burning pain had spread to both forearms, into the groin and along both thighs as far as the knees. He became progressively more distressed and restless, and felt slightly nauseated, but did not vomit. He had no headache. Later he experienced difficulty in starting micturition, and developed retention of urine. His local doctor gave him an injection of morphine that evening, but he remained restless throughout the night. On the fourth day his condition was much worse, and he complained of severe pain and burning paræsthesiæ all over the body. His legs had become weak and unsteady, and he had to be assisted to the toilet. Urinary retention and slight nausea persisted. He became intermittently confused and delirious, and occasional rigors and mild muscle spasms were observed by his wife. Later he complained also of backache, and said that he felt very cold. He had noted a transient urticarial rash on his neck that morning.

On examination on the fourth day after the onset of his illness, the patient was seen to be a tall man, very restless and in great distress, rolling about in bed. He was rational and his speech was distinct. He had photophobia and preferred to keep his eyes shut. He had lost his right eye in an accident during childhood, and wore a glass prosthesis. The left optic disk and retinal vessels were normal; mild conjunctivitis was present. The pupil was small and reacted normally to light and accommodation convergence. No abnormality was found on examination of the other cranial nerves. Tone and power were normal in both upper and lower limbs. All the tendon reflexes were brisk and symmetrical on the two sides, and the plantar responses were flexor. Cutaneous sensation was normal, and no objective hyperæsthesia of skin or muscle could be demonstrated. Passive movement was normally appreciated in fingers and toes. During the examination, several mild spasms of the extensor muscles were observed. He had no neck rigidity, and Kernig's sign could not be elicited. His stance was unsteady, and he had to be assisted when he attempted to walk. The pulse rate was raised to 100 per minute, and the pulse was regular in time and amplitude. Examination of the heart revealed no abnormality, and the blood pressure was 160/100 mm. of mercury. No abnormal signs were found on examination of the chest or abdomen. He had a mild elevation of temperature to 99·8° F. No skin rash could be seen.

He was admitted to a major Sydney hospital on January 4, and was treated with phenobarbitone tablets (one grain three times a day) and sodium pentobarbitone three grains at night. During the first two days after his admission to hospital he remained very restless and was given to swearing. He continued to complain of pain and

burning paræsthesiæ, which had spread to involve also his palms and soles. Urinary retention persisted, and his bladder required catheterization. A mild rise of temperature and regular tachycardia continued, and the physical signs did not change until January 7, when all his tendon reflexes became sluggish. On January 8 he showed considerable improvement, was no longer restless, and recovered from his urinary retention; however, fever and tachycardia remained. His normal placid and controlled manner returned, and he denied any recollection of his restless behaviour or of the events of the day of his admission to hospital and of the first 36 hours in hospital. On January 11 he was no longer restless or irritable, and had no photophobia. Some subjective hyperæsthesia remained on the palms and soles, but he had no residual discomfort over the trunk and the proximal parts of his limbs. A very fine desquamation of the skin over the trunk and limbs was observed. He still had slight hesitancy of micturition. The tendon reflexes were sluggish and symmetrical. No other abnormality was discovered on neurological and general systemic examination.

Investigations.

During the first three days after the patient's admission to hospital, the urine contained sugar and acetone. A random blood sugar estimation was 176 mg. per ml. Microscopic examination of a centrifuged deposit of urine showed an occasional red blood cell per high dry field, but no casts. The blood urea content was 43 mg. per 100 ml. A blood count revealed a hæmoglobin value of 17·3 grammes per 100 ml., and a total white cell count of 10,900 per cubic millimetre, with a normal distribution. The erythrocyte sedimentation rate was 6 mm. after one hour (normal, 2 to 4 mm.). Liver function tests, including estimation of the serum bilirubin content, thymol turbidity, zinc sulphate turbidity, serum alkaline phosphatase content and serum proteins, were carried out on January 6 and all gave results within normal limits. The urine contained no abnormal amounts of porphyrins. The serum cholinesterase activity was normal. At lumbar puncture a pressure of 120 mm. of cerebro-spinal fluid was recorded. The fluid contained three lymphocytes per cubic millimetre and was sterile. The cerebro-spinal fluid protein content was 62 mg. per 100 ml., the sugar content 87 mg. per 100 ml., and the chloride content 725 mg. per 100 ml. The Wassermann reaction in the cerebro-spinal fluid was negative, and the colloidal gold test produced no reaction.

During the illness the patient lost about two stone in weight. Subsequent to his discharge from hospital, for approximately three weeks, mild tingling in the hands and feet continued, with an occasional flare-up. Reaction to towelling the skin persisted for about five weeks, and at times some mental depression was felt. After a two weeks' holiday away from home, in the fifth and sixth weeks after the onset of his illness, the patient felt much better, and by the eighth week he considered that he was back to normal health.

Discussion.

The symptoms exhibited, particularly those of nervous origin, are similar to reactions arising from absorption of toxic amounts of chlorinated hydrocarbons. No other cause of these symptoms could be found.

Experimental work with chlorinated hydrocarbon insecticides has been carried out with animals, virtually since their inception. Their effect on the central nervous system of various species has been well established, both in acute and in chronic poisoning. Although there is a gradation in the toxicities of the various compounds, there is a general similarity in the end result provided sufficient absorption occurs.

The case under discussion was considered due to chlordane, because of the general symptomatology and the absence of any other detectable cause.

In 1953, in a publication by the World Health Organization,[17] the lack of specific information on human poisonings by insecticides was mentioned. Although cases are reported from time to time in the literature, it is thought that many others must occur that do not become generally known. Such a position, no doubt, exists in this country. For more complete information on the effects of insecticides, it is considered that compulsory notification to a central authority of cases of poisoning would be invaluable.

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THYMIC CYST.

By DANIEL LANE,
Brisbane.

CYSTS of the thymus are considered rare, but even more so when one presents in the lower part of the neck, simulating a thyroid tumour to a nicety. A case of a benign thymic cyst presenting in the neck is reported here.

Clinical Record.

Mrs. A., aged 27 years, was referred by her general practitioner on October 25, 1958, with a lump in the neck, which he considered to be a thyroglossal cyst. She gave a history of having noticed a lump in the neck for a few weeks. Apart from some aching in the neck, there were no other relevant symptoms.

Examination revealed a smooth firm swelling about one inch (2·5 cm.) in diameter, which appeared to be arising from the inferior pole of the left thyroid lobe, extending behind the sternum (Figure I). The swelling moved upward on swallowing. It seemed that the most likely

diagnosis was a solitary thyroid adenoma extending retrosternally.

Operation was performed on November 19, with the use of Kocher's collar incision. Figure II depicts the anatomical relationship of the cyst. It was found that the tumour was a tense cyst measuring about 2 cm. in

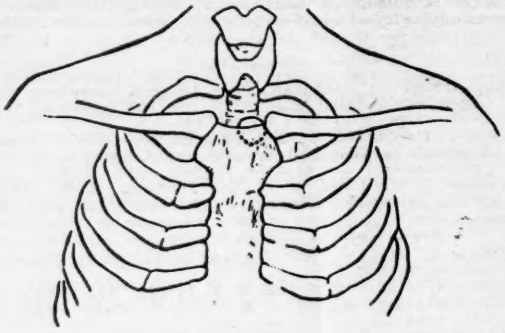

Figure I.

diameter and situated in a tongue of thymic tissue; the latter was attached to the posterior surface of the left thyroid lobe. No undue difficulty was experienced in dissecting out the cyst and surrounding thymic tissue. The left recurrent laryngeal nerve was identified.

The patient made an uneventful recovery, and was discharged from hospital on the fifth post-operative day. She has remained well since leaving hospital.

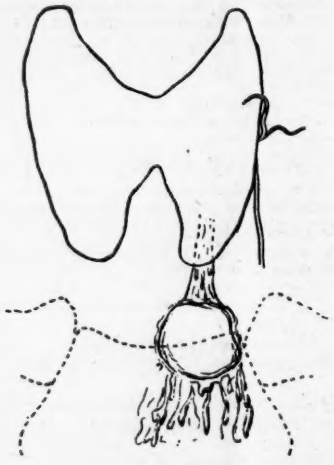

Figure II.

Pathological Findings.

On section the cyst contained clear glairy fluid. It was surrounded by normal-looking thymic tissue.

Dr. Margaret Mead reported that the cyst wall was composed of hyalinized fibrous tissue, which in most places formed the lining, except for small isolated fragments of compressed squamous epithelium. Figure III shows a typical area of the cyst wall.

Comment.

Reports on thymic cysts are scattered and large series are not available for review.

Sorensen *et alii* (1956) report four cases of thymic cyst over an eleven-year period from the Rigshospital, Copenhagen. One of their cases presented as a retrosternal "thyroid" enlargement causing severe pressure symptoms. Operation revealed a cyst below the thyroid extending into the chest, but not attached to the thyroid as in the foregoing case. In their case the cyst was first aspirated and then enucleated without difficulty. The cyst had caused considerable pressure on the left recurrent laryngeal nerve, the function of which improved soon after operation.

Figure III.

The case reported in this paper draws attention to the fact that a thymic cyst can present clinically exactly like a thyroid swelling. Such a cyst can sometimes be removed without difficulty through the ordinary Kocher approach. Cysts in this situation can readily cause pressure symptoms and should always be removed if possible. It is advisable to identify the adjacent recurrent laryngeal nerve to avoid risk of operative damage. The case also illustrates the advisability of removing all solitary swellings in this region especially to establish their nature. Sometimes we will be surprised at the nature of the "thyroid tumour".

Reference.

Sorensen, H. R., *et alii* (1956), "Thymogenic Tumours and Cysts", *Acta chir. scand.*, 110: 353.

Reviews.

Major Endocrine Disorders. By S. L. Simpson, with the collaboration of A. S. Mason and G. I. M. Swyer; Third Edition; 1959. Melbourne: Oxford Press. 8¾" x 5¼", pp. 467, with illustrations. Price: 72s.

This is a familiar text, now rewritten by the original author with two collaborators who are well known for their own contributions, and somewhat modified in format and subject in this edition. In the preface the senior author reaffirms his intention of serving the clinician and, for this purpose, does not regard "modern laboratory investigations and hormone assays" as substitutes for "clinical judgement". Therefore, the approach to endocrinology in this book is clinical.

This book is divided into six chapters, each devoted to a major endocrine gland—the pituitary, the adrenals, the thyroid, the parathyroids, the gonads and the pancreas; these chapters are further subdivided, on a clinical basis, into a series of sections or paragraphs. The scope of discussion is reflected by 12 sections in the chapter on the adrenals and in that on the gonads, likewise by seven sections in the chapter on the thyroid, etc. Except for the chapter on the pancreas, the first section of each chapter gives an introduction, then physiology and biochemistry are discussed, and the last section lists selected references up to 1958. The illustrations, none of which are coloured, are of necessity selected, but are pertinent and helpful. There is a full index to a book which is reasonably complete in scope, particularly when its purpose is appreciated.

This work has always had unmistakable traces of individualism; these persist, although the critical reader may now detect different styles with the several authors. The individualism of the book, and its clinician's approach, will lead many to purchase it; but perhaps it will best serve the experienced practitioner and post-graduate student wanting to compare clinical experience. Also, because it represents one approach to endocrinology, it merits the specialist's attention; but it is not beyond the undergraduate's compass as a survey of this branch of medicine, for it is not burdensomely detailed. Certain sections may appear, on a quick glance, to out-balance others in terms of length—but reasonably so when the details given in these are considered. The references to specific cases in discussions on less clearly defined syndromes—for example, post-puberty castration, pseudohermaphroditism, etc.—are both interesting and helpful. Adipose gynism and gynandrism receives a full description, which will help many clarify their concept of this syndrome.

However, there are a number of disputable details in parts of the text. Do achondroplasiacs have "spade-like hands"? Not all will agree with the definition that "infantilism is a condition of somatic growth and sexual development corresponding to a normal individual several years younger than the patient, and never attaining adult physique or sexual maturity". Nor will all agree that adiposity excludes infantilism, as is subsequently implied. Is it true that, in Simmonds' disease, "crisis following cerebral surgery can be differentiated from loss of consciousness due to cerebral injury by the absence of localizing signs in the central nervous system"? Is it true that "deoxycortone acetate is never required" in the treatment of Simmonds disease? Perhaps these are the emphases of a didactic teacher.

The notes on adrenocortical secretion in pregnancy will need modification. On the whole, adrenal hyperfunction states are classified clinically only with some difficulty; of necessity, such sections become somewhat amorphous when details of steroid chemistry cannot be utilized; this is a fault of the subject. It may be argued with some justification that an intravenous infusion of "20 Units (of ACTH) in 100 mg. of saline in thirty minutes" is too rapid for a diagnostic measure in Addison's disease. The therapeutic test suggested later is not error free when compared with direct assays of adrenocortical response. It seems rather surprising that "in the more chronic forms of Simmonds' disease the adrenals may have lost their ability to respond to ACTH, but this ability is often restored by cortisone therapy over a period".

The restriction in usage of the term "myxœdema" for the condition resulting from primary thyroid disease is justified historically, but may be unfortunate if a clinician is to remember secondary hypothyroidism as an aspect of hypopituitarism. Sometimes in this latter condition the clinical features are predominantly those of hypothyroidism, and not dissimilar from "myxœdema". Thyroid dosage for cretins in later childhood, and also presumably childhood myxœdema, is probably too low if a maximum therapeutic effect is desired.

The use of Types I to III for the classification of male pseudohermaphroditism will be deplored by some, not unreasonably. It could be regarded as unfortunate that other so-called intersex states and conditions of gonadal dysgenesis were not included in this section so as to reveal the spectrum of the problem. Nevertheless, the authors are to be complimented on introducing the subject of intersex or sex reversal into their book, for it is indeed an interesting page of medical history.

In the text there are several errors of spelling, inconsistencies in quantities and missing words which merit correction. These do not seriously detract from the quality printing of this reasonably priced book. Although criticism is expressed the book is well worth perusal—it makes the reader think; and it is interesting to observe the advances that this edition has made upon its predecessors.

Il Timo: Studio Fisiopatologico Clinico E Terapeutico Delle Affezioni Chirurgiche Dell'Organo. By G. Sarteschi and G. R. Bettolo; 1956. Pisa: Amnia Medica. 9¾" x 6¼", pp. 416, with 172 illustrations. Price not stated.

THE two Italian authors of this book, which might have been entitled "A Thymus Cyclopædia", were evidently determined to collect and classify every article and reference dealing with the thymus which has appeared in medical literature up to the time of composition. The result is a learned treatise, which is divided into a number of chapters on the following subjects: embryology; anatomy, including surgical anatomy; physiology; pathology, with full descriptions of tumours, benign, malignant, dubious and mixed; medicine in its several branches; and surgery. The only omission seems to be genetics, but here lack of material is probably responsible. The reader who consults this work in the hope that the problem of thymus function is solved will be disappointed; experimental results and clinical details are piled up, but are mutually cancellating. Myasthenia gravis pseudo-paralytica (Erb-Goldflam disease) is examined in detail; but even here, though there is some evidence of thymic association, the reader is left unconvinced. The question will be propounded, what useful purpose do such laborious scholarship and expensive publication fulfil? The answer is that the problem of the function of the thymus is certain to attract from time to time the investigator who would like to put a pet hypothesis to the crucial test of laboratory or hospital experiment; but before entering on such a research, he can in these pages find out all that has been attempted in this fascinating field, and possibly may discover that his ideas have already been entertained and critically examined by others, whose arguments and experimental results are set forth in convincing detail.

The final chapter on surgical technique is admirably presented and can be warmly commended. The book is well set up, the paper and printing are of high quality, whilst the illustrations, especially the photomicrographs, are of a standard one would wish was more prevalent in medical literature.

The Plasma Proteins: Clinical Significance. By P. G. Weil, B.A., M.D.C.M., M.Sc., Ph.D.; 1959. Philadelphia, Montreal: J. B. Lippincott Company. 7¾" x 4¼", pp. 149. Price: £1 18s. 6d.

A GREAT DEAL of work has been done over the past few years on the different proteins found in blood plasma and their relation to disease processes. The results of these investigations are widely scattered in the literature, and there was need of a balanced account of this work, particularly in its relation to clinical medicine. Paul G. Weil has endeavoured to give such an account in this small book. It has 122 pages of text and the pages measure only seven inches by four and a half inches, so that the work is little more than an extended essay. The book starts with a section on proteins generally and their possible origins, but this is so short as to be practically valueless. It is followed by six pages on methods used for studying plasma proteins. The scope of this can be gathered by the fact that only 190 words are used to describe the electrophoretic method which is so essential in studies on mixed proteins. A section on albumin follows, particularly the relation between hypoalbuminæmia and various diseases and the different plasma protein substitutes. After a short section on fibrinogen, the rest of the book is concerned more or less with the various serum globulins and their relations to disease processes. Very brief accounts are given of many different disease conditions, but some of the accounts are little more than definitions. There is a small bibliography. There has been an attempt on the part of the author to cram too much into too little space, and the result is not very successful. The book could be read with interest by any medical man as a short introduction to the subject, but if he wanted to know anything about the disease processes he would have to consult other sources, and it is a pity that the bibliography given is so brief.

The Clinical Evaluation of New Drugs. By fourteen authors; edited by S. O. Waife, M.D., F.A.C.P., and Alvin P. Shapiro, M.D.; 1959. New York: A Hoeber-Harper Book. 9" x 6", pp. 234. Price: $7.00.

WITH the vast number of new drugs appearing on the market for the treatment of many different diseases, it became apparent that a careful appraisement of the methods used for determining the efficacy and safety of drugs was needed. A great many investigations have been made over the past few years, and the newer methods which have resulted from these give much more accurate information than the older methods. A detailed account of modern methods is given in the present book. The authors are all in some way associated with work on the evaluation of drugs, and all are men of eminence in this field. The first half of the book deals with the principles of drug evaluation and includes the following papers: "The Statement of the Problem", "From Animals to Man", "Experimental Design and Statistical Problems", "Placebos and the Evaluation of the Subjective Response", "The Ethics of Experimentation on Human Beings", "Human Beings as Experimental Sub-

jects", "The Training of the Investigator", "The Investigator Himself". It will be seen that the ground is very thoroughly covered, and the individual articles are interesting, stimulating and full of information. The articles on the investigator, his training and his character give one much to think about, and could be read with advantage by heads of university science departments.

The second half of the book deals with clinical trials in practice. The essays here deal with infectious diseases, cardio-vascular disorders, gastro-intestinal diseases, nutrition and metabolism, endocrinological problems and neuropsychiatric disorders. This is a selected group of disorders on which a great deal of work has been done; but the principles laid down are as applicable in all diseases. The whole of this section could be read with advantage by all physicians.

This is one of the most interesting, informative and useful books on general medical science and its clinical application that has appeared for a long time. It can be recommended for general reading by all who have to do with drugs and their use in disease.

The Hand: Its Anatomy and Diseases. By John J. Byrne, M.D.; 1959. Oxford: Blackwell Scientific Publications. 9″ × 6″, pp. 398, with 165 illustrations. Price: 80s. (English).

IT is good that monographs on the hand should appear from time to time, particularly as the last 10 years have seen many advances in its surgical treatment. Professor Byrne's book is well written and may be commended to surgeons already engaged in this type of surgery. It is, however, incomplete, in that it is difficult to extract from its pages the best method of treatment for an individual patient. Little is said about after-care, particularly physiotherapy and rehabilitation. For this reason the book has a limited appeal.

A search for the author's guiding principles utilized in the treatment of the septic hand proved of little avail, and it seems to us that these should have been clearly stated.

The chapters on special injuries and occupational stigmata are of considerable interest, bringing together a number of unusual conditions which are normally scattered through the pages of general text-books.

The references are well chosen and add a great deal to the value of the book. The index is comprehensive and includes the names of authors referred to in the text. The illustrations are clear, but some do not tie in with the text—for example, Figures 13 and 19—and unfortunately outdated anatomical nomenclature has been used.

The general production of the book is of the high quality expected of Blackwell's; but the sterling price of £4 will limit its sale to interested specialists.

So You Have Glaucoma. By Everett R. Veirs, M.D.; 1958. New York and London: Grune and Stratton, Incorporated. 9″ × 5½″, pp. 70, with 10 illustrations. Price: $2.75.

ANY means which can be utilized to instil in the mind of the glaucoma patient the nature and significance of his disease should be grasped. In his book, Everett R. Veirs has tried to give the patient an understanding of his disease and its treatment.

This book is not a treatise on glaucoma; it is written for the patient, not the surgeon. Glaucoma is defined and the nature of intraocular pressure explained to the patient. The anatomy and physiology of the eyes as related to glaucoma are explained, and then fellows a brief description of the types and causes of glaucoma, and its signs and symptoms, diagnosis and treatment.

The final chapter, a postscript, is a catalogued list of instructions to glaucoma patients, which in general could serve as a useful list to be given to all glaucoma patients.

The book is a simple explanation of the disease, which can be recommended to the more intelligent glaucoma patients.

Elements of Vital Statistics. By B. Benjamin, B.Sc., Ph.D., F.I.A., F.S.S.; 1959. London: George Allen & Unwin Limited. 9¾″ × 6″, pp. 352. Price: 56s. (English).

DR. BENJAMIN, Medical Statistician to the London County Council, has written a book for the medical officers of health, giving the results of his experience in this field. The examples chosen and the statistical offices cited are almost invariably English, and so are the bibliographical references. An English medical officer of health would find it an invaluable book. In Australia, we could make use of it by realizing how many more sources of information on statistics are available to workers in medicine or the social sciences in England than here. We might mention some such topics that are fully discussed by Dr. Benjamin—the statistics of infectious diseases, maternity and child care, the health of school children, accident statistics, industrial incapacity, hospital statistics, cancer and mental health statistics. In all these fields, Australian records are markedly inferior to the English. The book gives a clear description of the usual topics of vital statistics and can be recommended for public health workers.

Books Received.

[The mention of a book in this column does not imply that no review will appear in a subsequent issue.]

"A Final Study in the Nature of Disease", by J. E. R. McDonagh, F.R.C.S.; 1959. London: William Heinemann, Medical Books, Limited. 8½″ × 5½″, pp. 396, with charts. Price: 30s. (English).

"The Heinz Handbook of Nutrition: A Comprehensive Treatise on Nutriton in Health and Disease", published for H. J. Heinz Company. London, New York and Toronto: McGraw-Hill Book Company, Incorporated. 9″ × 5¾″, pp. 452. Price: $5.75.

"European Technical Conference on Food-Borne Infections and Intoxications, Geneva, 16-21 February, 1959: Report", World Health Organization Technical Report Series, No. 184; 1959. Geneva: World Health Organization. 9¼″ × 6¼″, p. 18. Price: 1s. 9d.

"Kinesiology and Applied Anatomy: The Science of Human Movement", by Philip J. Rasch, Ph.D., C.C.T., F.A.C.S.M., and Roger K. Burke, Ph.D., F.A.C.S.M.; 1959. Philadelphia: Lea and Febiger. Sydney: Angus and Robertson, Limited. 9¼″ × 5¾″, pp. 456, with 226 illustrations. Price: 82s. 6d.

"Pyelonephritis", by Fletcher H. Colby, M.D.; 1959. Baltimore: The Williams and Wilkins Company. 9″ × 6″, pp. 226, with 94 illustrations. Price: 82s. 6d.

"The Foot and Ankle: Their Injuries, Diseases, Deformities and Disabilities', by Philip Lewin, M.D., F.A.C.S., F.I.C.S.; Fourth edition; 1959. Philadelphia: Lea & Febiger. Sydney: Angus & Robertson, Limited. 9¼″ × 5¾″, pp. 612, with 339 illustrations. Price: £7 14s.

"The Diabetic Life: Its Control by Diet and Insulin and Oral Treatment by Sulphonyl-Ureas, A Concise Practical Manual", by R. D. Lawrence, M.A., M.D., F.R.C.P. (Lond.); Sixteenth edition; 1960. London: J. & A. Churchill, Limited. 8″ × 5″, pp. 240, with 19 illustrations. Price: 15s. (English).

"Recent Advances in Public Health", by J. L. Burn, M.D., D.Hy., D.P.H.; Second edition; 1959. London: J. & A. Churchill, Limited. 9¼″ × 6″, pp. 382, with 54 illustrations. Price: 40s. (English).

"The Physiological Basis of Diuretic Therapy", by R. F. Pitts, Ph.D., M.D.; 1959. Springfield: Charles C. Thomas. Oxford: Blackwell Scientific Publications Ltd. 9″ × 5¾″, pp. 346, with illustrations. Price: 78s.

"Radiologic Examination of the Small Intestine", by R. Golden, M.D.; second edition; 1959. Springfield: Charles C. Thomas. Oxford: Blackwell Scientific Publications Limited. 10″ × 6¾″, pp. 576, with many illustrations. Price: £11 8s.

"Clinical Psychopathology", by K. Schneider; 1959. New York, London: Grune and Stratton Inc. 8½″ × 5″, pp. 190. Price: $4.50.

"Biological Problems of Grafting", a Symposium sponsored by the Commission Administrative Du Patrimoine Universitaire de Liege and the Council for International Organizations of Medical Sciences; 1959. Oxford: Blackwell Scientific Publications Ltd. 9½″ × 6″, pp. 466, with illustrations. Price: 50s.

"First Report on the Progress and Assimilation of Migrant Children in Australia", by A Special Committee of the Commonwealth Immigration Advisory Council; 1960. Canberra: The Commonwealth Immigration Advisory Council. 10¾″ × 8½″, pp. 44. Price not stated.

"Handbuch der Berufskrankheiten", by F. Koelsch; 1959. Jena: Veb Gustav Fischer Verlag. 9¼″ × 6¾″, pp. 1148. Price: D.M. 76.

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THE MODERN ALCHEMY.

SIR WILLIAM OSLER, addressing the Johns Hopkins Historical Club in 1901, remarked[1] that the nineteenth century had witnessed a revolution in the treatment of disease, and the growth of a new school of medicine. The old schools—regular and homœopathic—had put their trust in drugs, and for every symptom had a score or more of medicines—"vile nauseous compounds in one case; bland, harmless dilutions in the other". A characteristic of the new school was "firm faith in a few good, well tried drugs, little or none in a great mass of medicines still in general use". The battle against polypharmacy, or "the use of a large number of drugs (of the action of which we know little, yet we put them into bodies of the action of which we know less)", had not, Osler conceded, been fought to a finish. But progress was being made. "A new school of practitioners has arisen which . . . seeks to study, rationally and scientifically, the action of drugs, old and new. It is more concerned that a physician shall know how to apply the few great medicines which all have to use, such as quinine, iron, mercury, iodide of potassium, opium and digitalis, than that he should employ a multiplicity of remedies, the action of which is extremely doubtful." The growth of scientific pharmacology was to Osler full of exciting possibilities. "At any day", he said, "the new chemistry may give to us new remedies of extraordinary potency and of as much usefulness as cocaine. There is no reason why we should not even in the vegetable world find for certain diseases specifics of virtue fully equal to that of quinine in the malarial fevers."

What, we wonder, would Osler think of the therapeutic agents available today? To us his "few great medicines" form a pathetic list, to which in his life-time little was added. For he died in 1919—two years before Banting gave insulin to the world, seven years before the work of Whipple and of Minot and Murphy transformed the management of pernicious anæmia, and long before the day of sulphonamides, antibiotics, steroids and the many synthetic specifics which make up the vast majority of the modern doctor's prescriptions. The list of necessary therapeutic agents is still far from complete, and few of the individual items are perfect, but as a therapeutic armamentarium they are formidable. The revolution to which Osler referred has borne good fruit. Its roots lay, to a large extent, in the altered attitude to drugs and their use, but its flowering has depended mainly on the development of chemical synthesis. For this much of the credit must go to the pharmaceutical industry, and as a corollary a high proportion of prescribing and an even higher proportion of dispensing today are in terms of proprietary preparations. This last-mentioned fact has its drawbacks, but sincere as are the lamentations of those who deplore the decline in the art of writing prescriptions, and justified as are their condemnations of the blotting-paper prescriber, it is idle to try to put the clock back. The old-time bottle of medicine is sinking into the background, just as are, we rejoice to say, the old-style patent medicines. In this regard it is relevant to note that the tremendous modern expansion in the use of pharmaceuticals has been accompanied by a significant increase in the quantity of so-called ethical drugs used. M. L. Tainter and G. M. A. Marcelli[2] state that in 1929 the total drug sales at the manufacturers' price levels in the United States was 301 million dollars. Eighteen years later, in 1957, it had jumped to 2102 million dollars, a seven-fold increase. During this period sales of the proprietary drugs advertised directly to the lay public went from 152 million to 425 million dollars, an increase of 2·8 times, but, in contrast, the sales of drugs used solely by physicians jumped from 149 million to 1677 million dollars, an increase of 11·3 times. The great increase has been, they point out, in the potent specific drugs which require professional supervision to use. This is the picture as it is seen in America, and there is no reason to believe that it is any different here.

The story of modern pharmacy may be traced back nearly five centuries to Paracelsus and his remarkable advances against a background of the old alchemy. Tainter and Marcelli describe him as being consumed by three main principles: a violent opposition to the ancient authorities, a disdain for the fantastic polypharmacy of his day, and a militant belief in chemical specifics for diseases. Through his efforts, opium, mercury, lead, sulphur, iron, arsenic, and copper sulphate were admitted to the pharmacopœia, and he did much else to advance pharmacy. The real beginnings of the modern synthetic drug industry date from Wohler's synthesis of urea in 1828, and by the 1840's we find the synthetic organic materials, ether and chloroform, in use. After the accidental discovery of the first aniline dye in 1856, a great industry arose which is still making significant contributions to medicine. Nevertheless, by 1880 there were still only a dozen chemicals included in the great number of substances listed in Schmiedeberg's standard work "Foundation of Materia Medica". These were ether and chloroform as anæsthetics, chloral and paraldehyde as hypnotics, amyl nitrite for cardio-vascular action, four external or "internal" antiseptics (carbolic acid, pyrogallol, thymol and benzoic acid), pyrocatechin and hydroquinone as antipyretics, and the first of the coal tar synthetics, salicylic acid, as an antipyretic and

[1] "Medicine in the Nineteenth Century", in "Æquanimitas", 1904, Lewis, London: 267.

[2] *Bull. N.Y. Acad. Med.*, 1959, 35: 387 (June).

antirheumatic. Tainter and Marcelli suggest that Pasteur's success in developing preventive vaccination for rabies may have delayed to some extent concerted efforts towards a synthetic chemotherapeutic attack on other infectious diseases, but the development of synthetic drugs went on. A landmark was the appearance in 1910 of Ehrlich's "606", as practically all previous synthetic drugs of real value, except for some topical antiseptics, were merely symptomatic remedies. A quarter of a century passed before the next really significant development, the announcement to the world of the first sulphonamide, "Prontosil", in 1935, bringing as it did a completely new concept of the approach to chemotherapy.

The rest of the story is common contemporary knowledge. The ingenuity and skill of the pharmaceutical chemist have from here and there throughout the world produced a series of effective therapeutic agents of specific application, and in many cases of clearly defined pharmacological action. Unfortunately, but largely inevitably, these drugs are not cheap. The research necessary to find them and to test them before they are released to the public is expensive, as in most cases is their production even when they are established. Quite often they are superseded by superior drugs after being for only a short period on the market, and the pharmaceutical houses concerned, most of which are private businesses and do not pretend to be anything else, naturally look for a reasonable return on their outlay. However this may be, the relative cost of production of modern drugs is in fact decreasing, according to Tainter and Marcelli, because of the increased efficiency of production, and few countries in the world would even pretend that the national outlay on essential drugs was comparable to the amount spent on tobacco and alcohol. Moreover, as Tainter and Marcelli state, the greatest saving in costs of medical care has not been in the price of the medicine, but in the reduction of duration of illness and losses through sickness and death, and of its share in this the pharmaceutical industry can be justifiably proud. It is true that strong competition between drug houses, and the extension into the pharmaceutical industry of sales promotion methods which, though common practice in the business world, are causing increasing dismay to thoughful people everywhere, provide serious problems in a field where ethics can never be pushed into second place; and in this aspect of the matter the medical profession must be as much interested as it is in the advance of therapeutic knowledge. In practice, of course, this is the pharmaceutical industry's own affair, and we can do little more than offer our encouragement to those responsible firms which see its importance and are concerned about it. The situation is not simple. However, we may well think seriously over the belief strongly expressed by a senior teacher of medicine in Massachusetts, J. H. Means[8]: that it is necessary for medicine to work towards some form of ethical symbiosis with the pharmaceutical industry, if this can be done without compromising our own ethical standards. This is necessary, he comments significantly, because the industry can produce new scientific knowledge that medicine simply cannot afford to do without.

[8] *New Engl. J. Med.*, 1959, 261: 791 (October 15).

Current Comment.

ON THE STATE OF THE PUBLIC HEALTH.

THE annual report of the Chief Medical Officer of the British Ministry of Health is always an interesting document, since it contains informative comments on almost every aspect of public health. In the report for the year 1958,[1] under the heading "Vital Statistics" it is noted that, for the first time, the population of England and Wales exceeds 45 millions (the report refers only to England and Wales, as Scotland comes under separate jurisdiction in these matters), being an increase of 200,000 over the previous year. The expectation of life has remained practically constant over the past five years; the proportion of persons over 65 years of age has risen slightly, but the increasing number of deaths from cancer and degenerative diseases of the circulatory system tends to keep the figures of expectation of life stationary. The total number of births was the highest recorded since 1948. The still-birth rate at 21·5 per 1000 total births is the lowest ever recorded for England and Wales, but compares with a recent average figure of 16·5 for Australia.[2] The maternal mortality, infant mortality and neonatal mortality rates all also achieved new low levels. The maternal mortality rate of 35 per 100,000 total births is not comparable with the Australian figures discussed recently by Grace Cuthbert Brown,[3] as the latter were compiled on a different basis. Australian infant mortality and neonatal mortality rates are still both slightly better than the British figures. The chapter on vital statistics concludes with a short section on morbidity statistics from general practice, derived from an investigation carried out jointly by members of the College of General Practitioners and the General Register Office.

The chapter on general epidemiology records continued progress against most of the infectious diseases. There was one small outbreak of smallpox during the year, initiated by a lascar sailor who was transferred to an isolation hospital on the arrival of his ship in port. The chief interest of this outbreak lies in the fact that the second case was in an unvaccinated child, living in the vicinity of the hospital, though there was no known contact between the child or his family and any member of the hospital staff. The author of this chapter is forced to the speculation that the infection may have been air-borne from the hospital to the patient living outside its boundaries. Four other cases developed, one of which ended fatally, through direct or indirect contact with the child. With reference to vaccination against smallpox, it is noted that the acceptance rate for routine infant vaccination for the country as a whole was 44·5%, this figure showing a striking recovery from the low levels recorded when vaccination ceased to be compulsory ten years previously. Over 400,000 people received vaccination during the year, and among these, 23 cases of generalized vaccinia were reported (one fatality), and five cases of post-vaccinial encephalomyelitis (three fatalities). Three of the cases of generalized vaccinia, including the one fatal case, were of the severe form associated with eczema, in spite of the official recommendation that the presence (or even a history) of eczema should be an absolute contraindication to routine primary vaccination. There was a slight rise in the number of cases of diphtheria notified (80) from the extremely low figures (53 and 37) of the previous two years. This rise was mainly accounted for by two small epidemics in the last quarter of the year, and is taken to emphasize the need to maintain a high level of immunization in the child population. The number of children who had received reinforcing doses of diphtheria toxoid had declined during the past three years,

[1] "Report of the Ministry of Health for the Year 1958. Part II: On the State of the Public Health, Being the Annual Report of the Chief Medical Officer." London: H.M. Stationery Office.

[2] Average for the years 1951-55, as shown in the "Year Book of the Commonwealth of Australia", 1958, 44: 625.

[3] MED. J. AUST., 1960, 1: 1 (January 2).

though the percentage of children under five years of age who had completed a course of immunization had risen to 54%. The incidence of diphtheria in Australia compares very unfavourably with that in Britain; in both 1956 and 1957 over six times as many cases were notified in Australia as in the whole of England and Wales.

The incidence of poliomyelitis in Britain in 1958 showed a marked fall from the high incidence of the preceding year, but this fall could have been anticipated on epidemiological grounds alone. An account of the difficulties experienced over the supply of Salk-type vaccine shows that Britain was at least a year behind Australia in the progress of its immunization campaign against poliomyelitis, but by the end of 1958, 6·4 million people had received two injections of vaccine, and the proportion of children under 15 years of age so protected had risen to 60%. The problem of distinguishing non-paralytic poliomyelitis from other infections by neurotropic viruses is mentioned, also the fact that E.C.H.O. and Coxsackie viruses may exceptionally cause paralytic illness.

In the field of venereal diseases, a continued decline in the incidence of early syphilitic infections is noted. The number of patients suffering from acquired syphilis, with infections of less than one year, seen for the first time at the Ministry's clinics fell to 522 males and 182 females, less than one-twelfth of the numbers recorded ten years previously. Only 17 new cases of congenital syphilis were encountered in children under one year, a new low record, but 340 cases of congenital syphilis in patients aged 15 years or over were encountered; this was also a new low record, but the slower fall in this group reflects the high incidence of the disease 15 years previously. On the other hand the steep rise in the number of new cases of gonorrhœa in both sexes continued, the figure being the highest since 1948. The rise was fairly general throughout the country, but was most marked in certain areas where immigrants from overseas were numerous. This is but one of a number of instances in which the English public health statistics are influenced by the influx of considerable numbers of immigrants from the West Indies and other areas with a differing epidemiological situation. There is also a continued rise in the incidence of non-gonococcal urethritis in males, mirrored among females by a slow rise in the number of "other conditions needing treatment".

These are only a selection of the topics discussed in the first two chapters of this report. The remaining sixteen chapters cover much other interesting information which there is no space to discuss here, but a few points may be mentioned in passing. In the chapter on laboratory services there is a short section on "Q" fever, which was first detected in Britain in 1949, but the causative organism of which (*Rickettsia burneti*) has now been found to be spread widely in cattle and, to some extent, in sheep; blood examinations show that infection in man is not uncommon in some areas, though clinical cases are rare; it is stated that the evidence strongly suggests that sporadic cases result mainly from the consumption of raw milk, but that inhalation of contaminated dust has been suspected as the source of small outbreaks. In the chapter on cancers, it is stated that the lung cancer death rate continues to increase in both sexes, but that there is some evidence that the rate of increase is slowing down. During 1958, in England and Wales, an average of 54 persons died daily from cancer of the lung, in comparison with 15 who died in road accidents and 12 who died from tuberculosis. Another malignant condition which has increased greatly during the last 30 years is leukæmia—as the report comments, "part of a world-wide phenomenon"—but the death rate for this group of diseases has been stationary over the last three years. On the subject of cancer detection centres, after a discussion of experience in the United States and in Australia, the statement is made, "it is now realized that such centres cannot hope to solve any public health problem, and that they are prohibitive in staff. The idea has not found favour in this country". In the chapter on dental health services, there is an interesting section on fluoridation of water supplies, giving an account of the basis from which the Ministry arrived at its acceptance of the conclusion that fluoridation should be introduced in a few selected areas, "to determine the extent of the benefit which might be expected under British conditions, and to allow time to develop suitable equipment for the treatment of water supplies in the United Kingdom". Fluoridation was, in fact, introduced in Anglesey in 1955, and in two other areas in 1956. It is yet too early to expect any positive clinical results from these experiments, but it has been found that it is possible to maintain a contant level of fluoride in the water, and that this can be done without difficulty by water works personnel.

REGISTRATION OF OCCUPATIONAL THERAPISTS IN WESTERN AUSTRALIA.

IN 1957 the *Occupational Therapists Act* was passed by the Western Australian State Parliament after some anxious moments of debate regarding the necessity of inclusion of the "minimum world standard" of training as the yardstick for registration. The Board to administer the Act was appointed in 1958. It consisted of the Commissioner of Public Health or his deputy, a member of the Faculty of Medicine, nominated by the University Senate, two occupational therapists and a medical practitioner nominated by the Minister for Health. The request for this Act had been made by the Western Australian Branch of the Australian Association of Occupational Therapists with the object of establishing a small training school which would issue a diploma based on a training course adopted at a conference in Edinburgh several years previously. The Board consequently made recommendations to the Minister, and the Registration Board Rules were gazetted to come into effect on January 1, 1960. From this date registration was necessary for occupational therapists in Western Australia, and at a meeting on January 21, 1960, the Board resolved to grant registration to 15 occupational therapists and defer registration of two others.

Whilst the board is not empowered to set up a training school, it has interested itself in approaching various authorities on the question of whether a school could be established. A member of the Board has suggested that the members of many of the ancillary medical services have had initial training in subjects common to each profession, and, in an attempt to familiarize the members of the ancillary services with the work carried out by each profession, has advocated the idea that a teaching hospital could become the training school for nurses, physiotherapists, occupational therapists and dietitians. This proposition, in broad outline, was placed before the Board of the Royal Perth Hospital, and the Board has replied recently that it is sympathetic to this proposal and will be pleased to give careful consideration to any future information that may be provided. The final decision must rest upon confirmation from the State Government that it would subsidize the hospital to meet the salary of a director of training and other special costs.

The occupational therapists who are members of the Board have discussed the possibility that certain training might be carried out within the Technical School—namely, psychology, manual work and crafts. The Director of Technical Education has been most cooperative, and these courses can be provided at a very low cost indeed. An estimate of the cost for the first and subsequent years of training is now being prepared, and it appears that the cost will be low, because accommodation, clerical and stationery costs will be absorbed by the hospital and lecture costs shared with the other ancillary services.

It is believed that the registration of occupational therapists in Western Australia marks a step in the integration of what has been termed the "Greater Medical Services". Western Australia is the first State in Australia to achieve this registration, and it seems that, if the establishment of a training school eventuates, the recipients of the diploma will have had a thorough professional training.

Abstracts from Medical Literature.

SURGERY.

Spleno-Pulmonary Venous Anastomosis.

G. R. WALKER, P. FIELD AND P. E. CONEN (*Nature*, August 29, 1959) announce that a successful shunt between splenic vein and the pulmonary venous system via a parenchymatous anastomosis has been achieved in the dog. They state that the investigation was undertaken in an attempt to find a solution to the problem of extrahepatic obstruction of the portal venous system in young children, in whom this condition is not as amenable to successful treatment by current shunt operations as in adults. At operation, most of the spleen was removed, and the remnant was brought up on its pedicle, through the diaphragm and embedded in the lower part of the lung. The operation was found to be relatively easy to perform. It was performed on 18 dogs, and in the majority of cases they made a rapid recovery and resumed normal activity in one or two days. In nine dogs which were examined eight to 10 weeks after this procedure there was evidence consistent with the establishment of a successful anastomosis. The authors state that further work will be necessary before this experimental work can be applied to clinical problems, but they suggest that it may possibly provide a better method of treatment of portal hypertension in children than the present unsatisfactory procedure.

Palliative Treatment of Œsophageal Carcinoma.

W. WEISEL, F. RAINE, R. R. WATSON AND J. J. FREDERICK (*Ann. Surg.*, February, 1959) describe a method which they have used in the palliative treatment of carcinoma of the œsophagus. The lesion is first dilated to bougienage to a diameter of size 38 or 41 French. Then under local and/or general anæsthesia a Jackson filiform or Plummer silk-woven bougie is inserted under direct vision into the lower part of the œsophagus or stomach and the œsophagoscope is withdrawn. A specially prepared polyethylene tube 13 by 19 mm. in diameter is then inserted into the mouth and upper part of the œsophagus over the bougie. The œsophagoscope is reinserted over the bougie, and is used to force the plastic tube into its proper position. The tubes used vary in length from 10 to 25 cm., conforming with the extent of the lesion as determined by endoscopy and radiology. The distal end is slightly bevelled, and the proximal end flanged by a method using heat and compressive distortion. For the latter practice a special instrument has been designed.

L. SACHS (*Surgery*, March, 1959) comments on the futility of jejunostomy and gastrostomy for inoperable or unresectable carcinoma of the œsophagus. This was first recognized by Souttar in England, who designed a tube for introduction through the obstructed portion of the œsophagus. The author points out that this never became popular because of the danger of perforation or of rupture of the œsophagus due to dilatation, probably because the tube, though rubber, was surrounded by silver wire. The method fell into disrepute until popularized again by Allison in England in 1949, who again condemned jejunostomy and gastrostomy. However, the mortality of the passing of tubes through an œsophageal carcinoma is still high, owing to fistula formation and empyema, passage of the tube into the stomach, vomiting of the tube, or obstruction of the tube. The author has therefore designed a plastic tube on the screw principle for palliating patients with obstructing inoperable carcinoma of the œsophagus. This tube is inserted through an œsophagoscope with the aid of topical or inhalational anæsthesia, and obviates the necessity of gastrostomy or jejunostomy. It is useful also for feeding patients with carcinoma of the œsophagus during X-ray therapy. Its insertion does not require previous dilatation, which thus obviates one of the causes of perforation of the œsophagus. The tube is screwed or reamed through the growth along a bougie, and thus provides for snug fit for a long period of time. If there is overgrowth of the tumour causing obstruction at a later date, the tube can be adjusted through an œsophagoscope in an upward or downward direction. If it is overgrown at both ends or if it fits loosely, it can be replaced by a suitably sized tube. The patient should be checked by X-ray examination every six or eight weeks for position of the tube.

Pancreato-Duodenectomy for Periampullary Carcinoma.

W. HILST *et alii* (*A.M.A. Arch. Surg.*, May, 1959) discuss their experience in 49 cases of pancreato-duodenal resection over a nine-year period. In their whole series there were 23 operative fatalities, the patients dying within 30 days of operation. In 27 cases in which end-to-side anastomosis of the pancreatic duct to the jejunum was performed there were 14 operative deaths, seven patients developing fistulæ. The authors have recently employed a procedure in which an end-to-end anastomosis is performed between the pancreas and the stump of the jejunum, above the gastro-enterostomy; 13 patients have been treated by this procedure with only two operative deaths and no case of fistula formation. Two five-year cures are reported, one of a patient who had a cancer of the ampulla of Vater and one who had a cancer of the head of the pancreas. The authors consider that with their present operation the mortality rate has been reduced to an acceptable level.

Carcinoma of the Œsophagus and Cardiac Portion of the Stomach.

K. NAKAYAMA (*Surgery*, June, 1959) presents a statistical review of five-year survival rates after operation for carcinoma of the œsophagus and of the cardiac portion of the stomach, among patients seen at his clinic in Japan between 1946 and 1957. During this period successful surgery was performed in 953 cases of cancer of the œsophagus and cardiac portion of the stomach. There were 56 operative deaths, an operative mortality of 5·8%. Out of 286 patients who had been followed for five years after operation, there were 33 survivors at the end of that period, a five-year survival rate of 12·2%. From the point of operative mortality and long-term results, the author states that antethoracic œsophago-gastroanastomosis gave better results than intrathoracic anastomosis.

Carcinoma of the Floor of the Mouth.

W. F. MACFEE (*Ann. Surg.*, February, 1959) reviews the clinical behaviour and surgical treatment of carcinoma of the floor of the mouth. He states that it is a relatively uncommon form of cancer, and one of the more malignant forms of intraoral growth. The tumour invades neighbouring tissues by local extension and metastasizes to the lymph nodes in the neck in 50% of cases. More distant metastases may occur, but are not common. During the past 25 years operation has become the preferred treatment in most clinics. There is no general agreement about the place of cervical lymph node dissection in the treatment of cancer of the mouth. However, the author advocates excision of the primary tumour and complete dissection of the lymph nodes on the corresponding side of the neck; if these are involved the nodes on the opposite side of the neck should be dissected as soon as possible afterwards; if the nodes on the side of the primary tumour are not involved, dissection of the nodes on the opposite side may be omitted, at least temporarily, but the patient should be kept under close observation. Approximately one-third of patients without metastases survive and are free from recurrence for five years or more after surgical treatment, whereas the five-year survival rate of those with metastases is one-sixth or less. The overall five-year salvage rate is about one-quarter.

The Diameter of the Common Bile Duct.

D. O. FERRIS AND J. C. VIBERT (*Ann. Surg.*, February, 1959) comment on the sparsity of reference to the actual size of the common bile duct. Attempting to answer the question, they measured with small metal calipers the common bile ducts in 112 patients operated upon for disease of the biliary tract; all the measurements were made immediately after the gastro-hepatic omentum had been incised and the upper end of the common bile duct had been accurately exposed. Of the 112 cases, there were 98 in which no pathological change was noted in the common duct. Freedom from pathological change was determined by the usual methods of inspection and palpation, and was confirmed by operative cholangiograms in 88 cases and by instrumental exploration in the remaining 10 cases. In these 98 cases the diameters ranged from 4 to 17 mm., the average being 8·85 mm. In three of the 112 cases there were primary tumours of the biliary tract. In the remaining 11 cases stones were found in the common bile duct. In the last group the diameters ranged from 7 to 17 mm., the average being 10·9 mm. Thus some bile ducts not containing stones were as large as any that did contain stones. Moreover, eight of the 11 ducts containing stones were not large, but were between 7 and 11 mm. in diameter. It is therefore

obvious that diameter alone is not a reliable sign as to whether or not the common bile duct contains stones.

Peptic Ulcer and Pulmonary Emphysema.

W. SILEN, W. K. BROWN AND B. EISEMAN (*A.M.A. Arch. Surg.*, June, 1959) state that patients with advanced pulmonary emphysema are predisposed to the development of resistant and frequently complicated peptic ulceration. They discuss 20 patients with proved pulmonary emphysema. They show that gastric hypersecretion is common in emphysematous patients, that such hypersecretion may not necessarily be accompanied by ulceration, and that such hypersecretion seems to occur more commonly in those patients with severe degrees of emphysema. They could not discover any relationship between the venous carbon dioxide content of blood and the gastric secretion. On the basis of their study, the authors suggest that patients with advanced emphysema should be closely followed for the development of peptic ulceration, and that surgical indications be liberalized in the management of such ulcers, in order to avoid obligatory surgical intervention under less than optimal circumstances.

Stricture of the Common and Hepatic Bile Ducts.

W. WALTERS *et alii* (*A.M.A. Arch. Surg.*, June, 1959) report a study of the results of 308 operations for stricture of the bile ducts performed on 265 patients. Two series were studied; in the first the follow-up period was five to 25 years, and in the second it was one to five years. In the long-term group, 191 patients had 217 operations and in the short-term group 74 patients had 91 operations. Approximately 20% of the patients had two or more operations for strictures performed. Excellent or good results followed in 61% of the long-term patients and in 73% of the short-term group. The results from duct to duct suture and from choledocho-duodenostomy were practically the same in each series. These operations made up the major portion of the operations, although hepaticocholedochostomy, hepatico-duodenostomy and hepatico-jejunostomy were performed in an appreciable number of cases with almost equally good results, even in the 30 cases in which it was necessary to dissect out both hepatic ducts from the liver in order to anastomose them to the bowel. The best results in general were obtained when T-tubes were left in the anastomosis for from six to nine months. One woman was five months pregnant and another three months pregnant at the time of operation, and both pregnancies continued successfully to term. Many of the patients with good and excellent results reported two or three episodes of cholangitis during the first year after operation, but these attacks then disappeared. If attacks continue or worsen, it means obstruction of the anastomosis, and further operation is usually necessary. Stricture was due to surgical injury in all but one of the 265 patients studied; in the one exception it was caused by external trauma to the abdomen. Late deaths were due largely to severe cirrhosis which had been present at the time of operation, sometimes associated with hepatitis, or to unrelated causes such as cardio-vascular lesions.

An Improved Crimped Graft of "Teflon".

W. S. EDWARDS (*Surgery*, February, 1959) states that it is becoming increasingly clear that arterial homografts are less than ideal vascular substitutes because of degenerative changes that weaken the wall with occasional rupture, or obstruct the lumen with resulting thrombosis. He considers that the ideal grafting material is "Teflon", which is the most durable of all known fibres, and causes less tissue reaction than other substances. He states that the fibrin neointima heals and becomes attached to the inside far more rapidly than in any other synthetic tube. Seamless tubes are considered preferable to those with seams since the former are more flexible, easier to handle and less likely to wrinkle. Heat sealing of the end of the graft, rather than cuffing, is preferred, as it prevents fraying. While knitted grafts are quite resistant to fraying, they are moderately porous and careful preclotting is required. Tightly woven tubes, on the other hand, can be sutured without fraying if the cut ends are handled with moderate care. The author considers that woven crimped "Teflon" tubes have the distinct advantage of low porosity, which eliminates all problems with oozing through the graft even in hypertensive or heparinized patients, and states that this is the graft of choice in his clinic.

Linear Polyethylene for Arterial Anastomosis.

J. T. PHELAN (*Surgery*, April, 1959) presents a laboratory investigation of the use of linear polyethylene suture material for arterial anastomosis. As a result of this he concluded that 5-0 linear polyethylene is a satisfactory arterial suture material when employed for small artery anastomoses, and is superior to the use of silk.

Coronary Arterio-Venous Fistula.

P. W. SANGER, F. H. TAYLOR AND F. ROBICSEK (*Surgery*, February, 1959) state that congenital anomalies of the coronary arterial tree are seldom seen and relatively unknown. They point out that recent progress in cardio-vascular research clearly demonstrates that these conditions, although rare, have significant clinical importance. They state that malformation of a coronary artery may develop at its point of origin, in its distribution system or in its drainage. They have found 21 cases of abnormal coronary arterial drainage reported in the literature. Three anatomical varieties have been described, namely, a coronary artery draining directly into a heart chamber, one of the coronary arteries draining directly into the pulmonary artery and true coronary arterio-venous fistula. The authors present two cases of coronary arterio-venous fistula in which operation was successfully undertaken. One patient was a child with serious cardiac symptoms and a true coronary arterio-venous fistula; the other was a girl aged 18 years with an arterio-venous aneurysm which connected the left coronary artery to the right ventricle. The authors state that the clinical picture in anomalous coronary arterial drainage is that of a systemic arterio-venous fistula with an intracardiac shunt. These signs may or may not be accompanied by symptoms of myocardial insufficiency. They state that arterial blood draining in large quantities through the fistula and directly into the coronary sinus or into the right side of the heart increases enormously the coronary blood flow, but at the same time may decrease significantly the quantity of blood flowing through the myocardial capillary bed. The heart presents a typical picture of a left to right shunt. On the other hand, the widened pulse pressure, enlargement of the left ventricle, deviation of the main electrical axis to the left, and the continuous systolic-diastolic murmur are characteristic findings of an arterio-venous fistula. This unusual combination of clinical symptoms is very typical of a coronary arterio-venous fistula. The differentiation of this condition from the other anomalies causing similar symptoms is discussed. The authors consider that multiple ligation of the afferent artery is sufficient, after occluding the vessel temporarily before applying the final ligature. The occurrence of a large infarct or severe arrhythmia shows that the site of the ligature is not properly placed and must be changed. The authors conclude that all coronary arterio-venous fistulæ may be diagnosed clinically and treated surgically.

Extramammary Paget's Disease.

O. F. GRIMES (*Surgery*, April, 1959) discusses two cases which lend support to the thesis that Paget's disease represents secondary malignant intracutaneous spread from underlying primary cancer. The primary tumours in these cases were a mucoid adenocarcinoma of the anal canal and a carcinoma of the prostate. In the case of the patient with cancer of the rectum there was a white plaque-like growth of the skin in the perianal region. In the case of the patient with cancer of the prostate there was induration of the skin of the upper anterior aspect of the left thigh, scrotum and left inguinal region. Special stains showed in both of these lesions mucoid material in the Paget's cells similar to that which occurred in the underlying cancer. The author considers that Paget's disease represents merely an unusual mode of spread of cancer to the skin along an established lymphatic pathway.

Atheroma after Experimental Thromboendarterectomy.

P. F. GRYSKA (*Surgery*, April, 1959) subjected a series of animals to experimental aortic intimal resection, and then rendered them hypercholesterolæmic during the period of aortic wall regeneration. After five to six months of observation, examination of the major arteries revealed lipid deposition and gross atheroma only in the area of regenerated aortic wall. The author states that there was no correlation between serum cholesterol levels, time between operation and start of diet, and degree of atheroma. He concludes that mural thrombosis is probably a precursor of atheroma formation in some instances, but that further observation of human arteries which have been subjected to endarterectomy is necessary to correlate these observations.

British Medical Association.

VICTORIAN BRANCH: ANNUAL MEETING.

THE annual meeting of the Victorian Branch of the British Medical Association and the Medical Society of Victoria was held on December 2, 1959, DR. J. GAVIN JOHNSON, the President, in the chair.

MINUTES.

The minutes of the annual meeting held on December 3, 1958, were confirmed.

ELECTION OF OFFICE-BEARERS.

The Medical Secretary announced that the Council had elected the following office-bearers for 1959:

President: Dr. H. G. Judkins.

Vice-Presidents: Dr. G. Newman-Morris and Dr. Stanley Williams.

Honorary Secretary: Dr. A. W. Burton.

Honorary Treasurer: Dr. L. H. Ball.

Honorary Librarian: Dr. A. M. Hutson.

Chairman of Council: Dr. H. C. Colville.

The Medical Secretary announced that the following had been elected members of the Council by the general body of members: Dr. Kevin Brennan, Dr. Grayton Brown, Dr. J. L. Frew, Dr. H. G. Furnell, Dr. K. H. Hallam, Dr. A. M. Hutson, Dr. W. E. King, Dr. W. E. E. Langford, Dr. R. S. Lawson, Dr. D. G. Mackellar, Dr. A. B. McCutcheon, Dr. G. Newman-Morris, Dr. B. K. Rank, Dr. Stanley Williams.

The Medical Secretary announced that the following had been elected members of the Council by the subdivisions: Dr. Leonard Ball, Dr. A. J. M. Sinclair, Dr. T. G. Swinburne, Dr. N. L. Dodd, Dr. K. E. Ratten, Dr. H. G. Judkins, Dr. H. F. Tucker, Dr. J. G. Johnson, Dr. A. W. Burton, Dr. C. M. Roseby, Dr. J. F. Akeroyd, Dr. E. Sandner, Dr. V. D. Plueckhahn, Dr. M. H. Robinson, Dr. D. F. Mitchell, Dr. W. R. Angus, Dr. B. Hutton-Jones, Dr. F. R. Phillips, Dr. D. F. Lally.

The Medical Secretary reported that an election was taking place to determine representation of the Maroondah Subdivision, and that it was not yet complete.

The Medical Secretary announced that the ex-officio members of the Council were: Dr. H. C. Colville, Dr. F. L. Davies, Dr. D. Roseby, Dr. Robert Southby, Dr. G. Raleigh Weigall, Dr. J. P. Major. The representative of the Victorian Medical Women's Society was Dr. Alison Wright.

ANNUAL REPORT OF THE COUNCIL.

The annual report of the Council, which had been circulated among members, was received and adopted. The report is as follows.

The Council of the Branch and the Committee of the Society present the eightieth annual report of the Branch and the one hundred and fourth of the Society.

Election.

At the annual meeting held last December, the following members of the Council and of the Committee were elected, following a ballot of members of the Branch: Dr. Kevin Brennan, Dr. Grayton Brown, Dr. V. L. Collins, Dr. J. L. Frew, Dr. H. G. Furnell, Dr. Keith H. Hallam, Dr. A. M. Hutson, Dr. M. O. Kent-Hughes, Dr. W. E. King, Dr. A. B. McCutcheon, Dr. D. G. MacKellar, Dr. G. Newman-Morris, Dr. B. K. Rank, Dr. Stanley Williams.

The following were elected to represent the subdivisions: Dr. W. R. Angus, Dr. Leonard Ball, Dr. A. W. Burton, Dr. G. C. Darby, Dr. N. L. Dodd, Dr. W. P. Heslop, Dr. B. Hutton-Jones, Dr. J. Gavin Johnson, Dr. H. G. Judkins, Dr. D. F. Lally, Dr. D. F. Mitchell, Dr. F. R. Phillips, Dr. K. E. Ratten, Dr. M. H. Robinson, Dr. E. Sandner, Dr. A. J. M. Sinclair, Dr. T. G. Swinburne, Dr. H. F. Tucker.

Under Rule 9 of the Branch, Council elected Dr. Leslie Williams who was nominated by the Victorian Medical Women's Society.

The following are ex-officio members: the trustees of the Medical Society of Victoria, Dr. H. C. Colville, Dr. F. L. Davies, Dr. D. Roseby, Dr. Robert Southby and Dr. G. Raleigh Weigall; and the Director for Victoria of the Australasian Medical Publishing Company, Dr. J. P. Major.

Co-opted members: Dr. W. E. E. Langford and Major-General W. D. Refshauge.

The Council elected the following office-bearers:

President: Dr. J. Gavin Johnson.

Vice-Presidents: Dr. H. G. Judkins and Dr. G. Newman-Morris.

Chairman of Council: Dr. H. C. Colville.

Honorary Treasurer: Dr. Leonard Ball.

Honorary Librarian: Dr. V. L. Collins.

Honorary Secretary: Dr. K. E. Ratten.

The Executive consisted of the President, the Immediate Past President (Dr. Keith Hallam) and the other office-bearers.

Attendances at Council Meetings.

Thirteen meeting of the Branch Council were held during the year, the following showing the attendances:

Dr. F. L. Davies	13	Dr. D. F. Mitchell	9
Dr. W. P. Heslop	13	Dr. Kevin Brennan	8
Dr. J. Gavin Johnson	13	Dr. V. L. Collins	8
Dr. K. E. Ratten	13	Dr. A. B. McCutcheon	8
Dr. Robert Southby	13	Dr. M. H. Robinson	8
Dr. G. Raleigh Weigall	13	Dr. G. C. Darby	7
Dr. A. W. Burton	12	Dr. W. E. King	7
Dr. H. C. Colville[1]	12	Dr. B. K. Rank	7
Dr. M. O. Kent-Hughes	12	Dr. Stanley Williams	7
Dr. David Roseby	12	Dr. W. E. E. Langford	7
Dr. H. F. Tucker	12	Dr. H. G. Furnell	6
Dr. Leslie Williams	12	Dr. D. F. Lally	6
Dr. Leonard Ball	11	Dr. J. P. Major	6
Dr. Grayton Brown	11	Dr. G. Newman-Morris[1]	6
Dr. Keith H. Hallam	11	Dr. B. Hutton-Jones	5
Dr. E. Sandner	11	Dr. F. R. Phillips	5
Dr. George Swinburne	11	Dr. W. R. Angus	4
Dr. N. L. Dodd	10	Dr. D. G. MacKellar	4
Dr. A. M. Hutson	10	Major-General W. D. Refshauge	4
Dr. J. L. Frew	9		
Dr. H. G. Judkins[1]	9	Dr. A. J. M. Sinclair	2

Dr. E. Fargie and Dr. H. R. Millikan each attended one meeting at proxy for Dr. G. C. Darby, and Dr. M. Clark represented Dr. E. Sandner at one meeting.

The highest attendance at any one meeting was 36, and the average was 29.

Subcommittees of the Branch Council.

[The first-named is the Convenor.]

Complaints: Dr. Davies, Dr. Judkins, Dr. McCutcheon, Dr. Newman-Morris and Dr. Roseby.

Correspondence: Dr. Colville and Dr. Ratten.

Ethics: Dr. Major, Dr. Davies, Dr. King, Dr. Roseby, Dr. Southby, Dr. Swinburne, Dr. Weigall and the Executive.

Finance, House and Library: Dr. Ball, Dr. Burton, Dr. Collins, Dr. Furnell and Dr. Judkins.

Hospital: Dr. Southby, Dr. Ball, Dr. Brennan, Dr. Collins, Dr. Colville, Dr. Dodd, Dr. Frew, Dr. Hallam, Dr. Judkins, Dr. Kent-Hughes, Dr. King, Dr. Rank, Dr. Weigall and Dr. Stanley Williams.

Information Service: Dr. Rank, Dr. Brennan, Dr. Collins, Dr. Kent-Hughes, Dr. Phillips and Dr. Ratten.

Legislative: Dr. Davies, Dr. Colville, Dr. Hallam, Dr. Rank and Dr. Sinclair.

Organization: Dr. Swinburne, Dr. Ball, Dr. Brennan, Dr. Burton, Dr. Colville, Dr. Dodd, Dr. Frew, Dr. Furnell, Dr. Hutson, Dr. Johnson, Dr. Judkins, Dr. Kent-Hughes, Dr. McCutcheon, Dr. Ratten, Dr. Roseby, Dr. Sinclair, Dr. Southby, Dr. Tucker, Dr. Leslie Williams and representatives of the country subdivisions.

Science: Dr. Hallam, Dr. Grayton Brown, Dr. Collins, Dr. Furnell, Dr. King and Dr. Stanley Williams.

Health Education: Dr. Roseby, Dr. Brennan, Dr. Hutson, Dr. Rank and Dr. Leslie Williams.

Social: Dr. Roseby, Dr. Burton and Dr. Weigall.

Workers' Compensation: Dr. Ball (resigned during the year), Dr. Grayton Brown, Dr. Colville, Dr. Judkins, Dr. Kent-Hughes, Dr. Newman-Morris, Dr. Rank and Dr. Roseby.

Special Committees and Offices Within the Branch.

B.M.A. 103rd Annual General Meeting, Prize Committee: Dr. J. P. Major, Dr. Ewen Downie, Professor E. S. J. King, Dr. G. R. Weigall and Dr. G. R. A. Syme.

[1] Granted leave of absence during the year.

Federal Medical War Relief Fund, Advisory Committee: Dr. F. L. Davies, Dr. H. G. Furnell and Sir William Upjohn.

Joint Committee with Health Department re Spheres of Responsibility for Medical Services to the Community: The President, Dr. G. Newman-Morris, Dr. A. J. M. Sinclair, Dr. V. L. Collins and Dr. George Swinburne.

Library Advisory Committee: The Honorary Librarian, Dr. J. H. W. Birrell, Dr. F. M. C. Forster, Dr. B. Gandevia, Dr. H. Boyd Graham, Dr. T. A. F. Heale, Dr. R. S. Lawson, Dr. Murray Maxwell and Dr. M. L. Verso.

Medical Officers' Relief Fund (Federal) Advisory Committee: Dr. F. L. Davies, Dr. H. G. Furnell and Sir William Upjohn.

Medical Society of Victoria, Trustees of: Dr. H. C. Colville, Dr. F. L. Davies, Dr. D. Roseby, Dr. Robert Southby and Dr. G. Raleigh Weigall.

Museum Advisory Committee: The Honorary Librarian, the Curator (Dr. B. Gandevia), Dr. J. H. W. Birrell and Dr. M. L. Verso.

Services Recognition Fund, Trustees of: Sir Albert Coates, Dr. H. G. Furnell and Major-General Sir Kingsley Norris.

World Medical Association Supporting Committee: Dr. D. Roseby, Dr. K. H. Hallam, Dr. B. K. Rank, Dr. A. J. M. Sinclair and Dr. Stanley Williams.

Appointments and Nominations.

Alcoholism Foundation of Victoria: Dr. L. H. Ball.

Anti-Cancer Council of Victoria: Dr. J. E. Clarke and Dr. H. Searby.

Anti-Cancer Council, Medical and Scientific Committee of: Professor Maurice Ewing.

Australian and New Zealand Association for the Advancement of Science, 34th Congress: Dr. V. D. Plueckhahn.

British Medical Association, Annual Representative Meeting, Edinburgh, 1959: Dr. H. C. Colville, Dr. G. Newman-Morris and Dr. R. G. Penington.

British Medical Association, Central Council: Dr. M. L. Formby.

British Medical Association in Australia, Federal Council: Dr. H. C. Colville, Dr. J. G. Johnson and Dr. George Swinburne.

British Medical Agency of Victoria Pty. Ltd., Directors: Dr. C. H. Dickson (Chairman), Dr. Leonard Ball, Major-General Sir Kingsley Norris, Dr. Robert Southby and Dr. A. W. Burton.

British Medical Insurance Company of Victoria Ltd., Directors: Dr. W. W. S. Johnston (Chairman), Dr. C. H. Dickson, Dr. H. G. Furnell, Major-General Sir Kingsley Norris and Dr. G. Newman-Morris.

Central Medical Library Committee: Dr. V. L. Collins.

Consultative Council on Influenza: Professor J. G. Hayden.

Consultative Council on Maternal Mortality: Dr. J. G. Johnson.

Consultative Council on Poliomyelitis: Sir William Upjohn.

Consultative Council on Quarantinable Diseases: Dr. P. Gilbert.

Dietetic Association of Victoria: Dr. T. A. F. Heale.

Fellowship of Christian Healing: Dr. A. Murray Clarke, Dr. Arthur J. Day, Dr. J. G. Johnson, Dr. H. G. Judkins, Dr. R. Southby and Professor Lance Townsend.

Filled Milk, Advisory Committee re: Dr. V. L. Collins.

Fluoridation of Public Water Supplies, Citizens' Committee for the Promotion of: Dr. Stanley W. Williams.

Hæmophilia Society: Dr. R. J. Sawers.

Health (Proprietary Medicines) Act, Advisory Committee under the Provisions of: Dr. Byron L. Stanton.

Hospital Benefits Association of Victoria: Dr. C. H. Dickson, Major-General Sir Kingsley Norris, Dr. H. G. Judkins and Dr. G. R. Weigall.

Hospitals and Charities Commission, Advisory Council to: Dr. L. H. Ball and Dr. C. H. Dickson.

Hospital Salaries, Advisory Committee re: Dr. V. L. Collins, Dr. G. Newman-Morris (Dr. J. L. Frew acted while Dr. Newman-Morris was absent for six months) and Dr. George Swinburne.

Joint Insurance Adjudication Committee: Dr. L. H. Ball, Dr. D. Roseby and Sir William Upjohn.

Lord Mayor's Fund: Dr. A. B. McCutcheon.

Lord Mayor's Country Children's Holiday Camp, Committee of: Dr. Gwynne Villiers.

Masseurs' Registration Board: Dr. Bryan Keon-Cohen and Dr. Leigh T. Wedlick.

Medical Eye Service of Victoria: Dr. E. N. Rosen.

The Medical Journal of Australia, Victorian Correspondent: Dr. C. H. Dickson.

Medical Society Trust Company Ltd., Directors: Dr. Leonard Ball, Dr. V. L. Collins, Dr. H. C. Colville, Dr. J. G. Johnson, Dr. K. H. Hallam, Dr. H. G. Judkins, Dr. A. B. McCutcheon and Dr. K. E. Ratten.

Medico-Pharmaceutical Liaison Committee: Dr. W. E. King, Dr. D. Roseby, Dr. Byron Stanton, the President (*ex officio*) and the Medical Secretary.

Melbourne Medical Post-Graduate Committee: Dr. F. R. Phillips and Dr. G. R. Weigall.

Museum of the Medical Society of Victoria, Curator: Dr. Bryan Gandevia.

National Committee of British Commonwealth Collection of Microorganisms: Professor S. D. Rubbo.

National Heart Foundation: Dr. J. L. Frew.

National Safety Council of Australia: Dr. Kevin Brennan.

Nursing Aide School, Committee of Management: Dr. W. D. L. Farrar.

The Occupational Therapy School of Victoria: Dr. D. O. Longmuir.

Old People's Welfare Council: Dr. A. B. McCutcheon and Dr. W. W. S. Johnston.

Opticians' Registration Board: Dr. R. Collmann and Dr. R. F. Lowe.

Pensioner Medical Service, Committee of Inquiry: Professor J. F. Hayden, Dr. C. Byrne, Dr. J. G. Johnson and Dr. M. O. Kent-Hughes.

Rehabilitation Medical Advisory Committee, Victoria (Social Services Department): Dr. J. Cuming Stewart.

Rotary Club (Citizens' Committee): The President of the Branch.

Royal Flying Doctor Service of Australia: Dr. George Simpson.

State Medical Planning Committee: Dr. H. G. Furnell.

Student Health Service, Advisory Committee to University: Dr. J. L. Frew.

Tetanus Prevention, Committee on: Dr. T. H. Ackland.

Victorian Baby Health Centres' Association: Dr. Stanley Williams.

Victorian Bush Nursing Association: Dr. E. McComas.

Victorian Council of Speech Therapy: Dr. Robert Southby.

Victorian Documentary Film Council, Advisory Committee on Scientific Films: Dr. Morris Davis and Dr. R. S. Hooper.

Victorian Health Week Committee: Dr. D. Roseby.

Victorian Nursing Council: Dr. J. L. Frew and Professor Lance Townsend.

Victorian Society for Crippled Children: Dr. John Cloke.

Branch Convocation.

The following were elected for the year 1959.—*Melbourne Central*: Dr. C. J. O. Brown, Dr. Douglas Donald, Dr. C. H. Fitts, Dr. T. J. F. Frank, Dr. Peter Freeman, Dr. H. Boyd Graham, Dr. T. A. F. Heale, Dr. Tom Hurley, Dr. Anthony Kelly, Dr. R. S. Lawson, Dr. Graham McKenzie, Dr. Ian McVey, Dr. G. Penington, Dr. H. A. Phillips, Dr. S. Reid, Dr. C. A. M. Renou, Dr. J. E. Sewell, Dr. Norman L. Speirs, Dr. G. Springthorpe, Dr. G. M. Tallent, Dr. Elizabeth Turner. *Eastern Suburban*: Dr. P. M. Birrell, Dr. W. L. Carrington, Dr. A. Feddersen, Dr. H. V. Francis, Dr. A. L. Hare, Dr. W. Hewitt, Dr. H. Hosking, Dr. H. Indian, Dr. H. H. Jackson, Dr. C. Lancaster, Dr. P. G. McMahon, Dr. R. G. Penington, Dr. N. McH. Ramsey, Dr. R. D. Rush, Dr. J. G. Simpson, Dr. T. Stokoe. *Northern Suburban*: Dr. F. A. L. Bacon, Dr. D. Cordner, Dr. J. E. Dunn, Dr. R. Gurry, Dr. D. C. Lear, Dr. H. R. Walker, Dr. I. A. Wilson, Dr. I. D. Wilson. *North-Eastern Suburban*: Dr. E. S. Esnouf, Dr. L. J. Hartman, Dr. B. H. McColl, Dr. C. F. MacGillicuddy, Dr. S. D. Mecoles. *Southern Suburban*: Dr. J. H. Body, Dr. D. L. Collie, Dr. G. A. Guthrie, Dr. A. Ley, Dr. L. Middleton, Dr. A. Rosenhain, Dr. R. S. Smibert. *South Central Suburban*: Dr. D. J. M. Dunn, Dr. E. A. C. Farran, Dr. L. W. Knight, Dr. Q. Whitehead,

Dr. C. W. Wilson. *South-Eastern Suburban*: Dr. J. F. Adamson, Dr. J. F. Akeroyd, Dr. James Best, Dr. R. D. Buntine, Dr. J. de Crespigny, Dr. C. C. Dyte, Dr. D. I. Hart, Dr. A. R. Haywood, Dr. N. H. Luth, Dr. R. Y. Mathew, Dr. G. W. Patterson, Dr. T. R. Thomson. *Western Suburban*: Dr. D. D. Coutts, Dr. A. H. Green, Dr. L. Gurry, Dr. R. H. Hardy, Dr. G. O. Phillips. *Ballarat*: Dr. B. A. Baker, Dr. G. R. Davidson, Dr. W. R. Griffiths. *Bendigo*: Dr. N. N. Harrington, Dr. W. J. Long, Dr. A. L. Newson. *Geelong*: Dr. E. I. Fargie, Dr. M. W. Morris, Dr. D. Seward. *Gippsland*: Dr. J. M. Andrew, Dr. W. G. Birks, Dr. A. A. Crook, Dr. W. F. Ferguson. *Goulburn*: Dr. A. E. Dickman, Dr. R. O. Mills. *North-Eastern Country*: Dr. A. D. C. Marshall, Dr. M. Rohan. *North-Western Country*: Dr. A. Hinchley, Dr. T. Walpole, Dr. R. Webster. *South-Western Country*: Dr. A. E. Brauer, Dr. S. C. Fitzpatrick, Dr. B. D. Vaughan.

Membership Roll.

The number of members on the roll at October 22, 1959, was 3205, which was 136 more than last year. Three hundred and eighteen names were added (150 by election, 54 were reinstated on payment of arrears, and 114 were transferred from other States and overseas); and 182 were removed (23 by death, 71 by transfer, 9 by resignation, and 79 allowed their subscriptions to fall into arrears).

Honorary medical members numbered 42 and there is one complimentary member.

Honorary student associates number 24.

Deceased.

The deaths of the following members and former members occurred during the year and are recorded with regret:

Dr. J. K. Adey, Dr. S. H. Allen, Dr. C. H. Anderson, Dr. J. Lee Atkinson, Dr. J. E. Bryne, Dr. Raleigh Clarke, Dr. M. Curzon, Sir Hugh Devine, Dr. A. M. Dillon, Dr. J. C. Douglas, Dr. Colin Friend, Dr. Hilda Greenshields, Dr. Reginald Howden, Dr. Allison Ingram, Dr. Graeme Larkins, Dr. H. Selby Link, Dr. H. F. Little, Dr. C. R. Merrilees, Dr. A. W. Morgan, Dr. D. Murray Morton, Dr. W. Ostermeyer, Dr. G. W. Patterson, Dr. J. G. Sheahan, Dr. M. D. Silberberg, Dr. Leslie Smith, Dr. W. H. Steel, Dr. W. H. G. Steele, Dr. A. R. Steven, Dr. J. C. P. Strachan, Dr. G. Murray Tallent, Dr. F. R. Vincent, Dr. E. E. Webster, Dr. T. G. Wynne.

It was with profound regret that Council learned in February of the death by accident of Dr. Angus McNeil, Assistant General Secretary of the Federal Council. The sympathy of members of Council is extended to his wife and family.

Remembrance Day.

In the presence of members of the Branch and relatives of deceased medical officers of the Armed Forces, a short ceremony was held in the foyer of the Medical Society Hall on Wednesday, November 11, 1959, to honour the Victorian medical officers who lost their lives in the service of the Commonwealth in the two world wars of this century. After the reading of the names of those killed on service and of those who had died while serving, the President laid a wreath on the War Memorial.

Annual Church Services.

The tenth annual church services for the medical profession were held in St. Paul's and St. Patrick's Cathedrals on Sunday, February 8, 1959. Members and their families and medical students attended the services, members and medical students forming processions to enter the cathedrals.

At St. Paul's Cathedral the sermon was preached by the Reverend G. W. A. Kircher, Th.L., Minor Canon and Precentor of the Cathedral, and the preacher at St. Patrick's Cathedral was the Reverend J. J. Gannon, O.P.

At St. Paul's the President, Dr. J. Gavin Johnson, and the Vice-President, Dr. H. G. Judkins, read the Lessons.

Dr. H. Cecil Colville: Portrait by William Dargie.

The election of Dr. Colville as Chairman of the Branch Council for 1959 meant that he had held that office for twenty years. Those who know his capabilities as a chairman will realize that the Branch has been fortunate to have his services for so long in what is in fact a tremendously heavy task. In 1955, following the death of Sir Archibald Collins, Dr. Colville was elected President of the Federal Council of the British Medical Association in Australia, and, whilst it could be seen by others that it was almost inevitable that he should eventually hold that position, the records of the Branch show that it was an office which he never at any time sought.

The Council decided that some recognition should be made of Dr. Colville's services, and as members will know, Mr. William Dargie was asked to paint his portrait. The portrait will be hung in the Medical Society Hall.

Congratulations.

Council had pleasure in congratulating the following during 1959:

Sir Arthur Thomson (President of the Home Association) and Sir Arthur Morrow (N.S.W.) on being created Knights Bachelor; Dr. Vernon Collins on being appointed Professor of Child Health in the University of Melbourne; Professor W. A. Osborne on becoming the Senior Member of the Physiological Society; and the following as recipients of Honours from Her Majesty the Queen: Dr. Lindsay Dey, C.B.E. (N.S.W.), Dr. J. A. James, C.B.E. (Canberra), Dr. A. B. Lilley, C.B.E. (N.S.W.), Major-General W. D. Refshauge, C.B.E., Dr. Janet Cooper, O.B.E., Dr. Doris Officer, O.B.E., and Dr. C. J. Tonkin, O.B.E.

Golf.

The twentieth annual golf tournament of the Branch was held on Wednesday, November 19, 1958, on the West Course of the Royal Melbourne Golf Club. Dr. K. B. Brown won the Weigall Cup (championship), and the Roseby Cup (handicap) was won by Dr. George Swinburne. The spoon competition was won by Dr. A. Ley and Dr. A. D. Wilson.

Entertainment.

The 1858 new graduates were welcomed by the President and members of Council at morning tea on December 22, and the supplementary graduates were welcomed in the afternoon on April 14, 1959.

On May 5, the Council held a small informal party for Dr. Paulino Garcia, Chairman of the National Science Development Board of the Philippines. The object of Dr. Garcia's visit to Australia was to study the organization of scientific research generally, but as a medical practitioner and a past Secretary of Health in the Philippines, he also visited medical research institutes in Victoria, and members of Council were pleased to have an opportunity of meeting him.

The President, Dr. Gavin Johnson, and Mrs. Johnson, entertained members of Council and subdivisional office bearers and their wives and representatives of other organizations at an enjoyable buffet dinner at Union House on October 15, 1959. After the dinner, Dr. Geoffrey Newman-Morris spoke about his recent trip abroad as Chairman of the Australian Red Cross Society, and showed some interesting slides.

Meetings of the Branch.

The following meetings of the Branch were held in Melbourne:

February: Dr. J. S. Collings and Dr. W. E. Swaney, in association with a physiotherapist, spoke on "Manipulation Technique".

April: Dr. Peter Ebeling spoke on "Electro-Myography".

June: Sir Albert Coates delivered the eleventh triennial Syme Memorial Lecture entitled "The Interest of the Practising Profession in Undergraduate Education".

August: On August 5, Dr. Austin Doyle spoke on "Hypertension". On August 19, the sixth Fetherston Memorial Lecture, entitled "The Anxieties of Pregnancies", was delivered by Dr. D. F. Lawson.

September: Dr. Alan A. Ferris and Dr. John A. Forbes discussed "Some Common Virus Infections".

October: The twenty-sixth Sir Richard Stawell Oration, "Personality Problems in Antarctica", was delivered by Mr. P. G. Law, Director of the Antarctic Division of the Department of External Affairs. After the oration Mr. Law showed a film entitled "Address Antarctica".

November: A panel consisting of Dr. D. G. Duffy, Dr. J. L. Frew, Dr. Margaret Holmes and Dr. A. V. Jackson spoke on "Nephritis".

The following demonstrations and clinical meetings were held in Melbourne:

May: St. Vincent's Hospital and the Commonwealth Serum Laboratories.

July: Royal Melbourne Hospital.

September: Department of Pathology, University of Melbourne.

October: The Royal Women's Hospital.

November: Neuro-surgical Unit, Mont Park.

The following meetings were held in the country:

April: Warrnambool—Clinical cases were presented in the afternoon at the Warrnambool and District Base Hospital. In the evening Dr. Leslie Hurley gave a talk on "Pyrexia of Obscure Origin".

June: Warragul—Clinical cases for discussion were presented in the afternoon at the West Gippsland Hospital, and in the evening Dr. E. Wilder spoke on "Carcinoma of the Cervix—Prevention and Diagnosis".

August: Geelong—A demonstration of cases in the Pathology Department of the Geelong and District Hospital was held in the afternoon, and in the evening Professor Zelman Cowen spoke on his recent visit to Ghana, West Africa.

The Branch Council expresses its appreciation and thanks to the committees and honorary secretaries of country subdivisions for arranging the country meetings, to the wives of members of the subdivisions for their hospitality to visiting members and their wives, and to the committees and matrons of the Warrnambool, West Gippsland and Geelong Hospitals for the provision of facilities.

The Branch Council also thanks the staffs of the Department of Pathology of the University of Melbourne, St. Vincent's Hospital, the Royal Melbourne Hospital, the Royal Women's Hospital, the Mont Park Mental Hospital, and the Commonwealth Serum Laboratories for arranging meetings.

Branch and Council Activities.

National Health Service.

Although it is the function of the Federal Council to conduct with the Commonwealth Government negotiations affecting the National Health Service, and reports of Federal Council Meetings are published in THE MEDICAL JOURNAL OF AUSTRALIA, the following matters of general interest that occurred during the year are reported for the information of members of the Branch:

1. *Anomalies in the Schedules of Benefits.* Since the inception of the Service the rebates for many procedures specified in the Schedules have had no relationship to fees actually charged, and the maximum Commonwealth benefit of £11 10s. did not pay a refund commensurate with the cost of major surgical procedures. The Federal Council submitted to the Minister for Health a suggested revision of the Schedules, and this has virtually been accepted without amendment and incorporated in a Bill to amend the *National Health Act*. In addition, as was announced in the Budget speech, the maximum Commonwealth benefit is to be increased to £22 10s., and as from January 1, 1960, the introduction of new tables by the benefit organizations will allow contributors to receive refund of surgical expenses up to £60.

2. *"Special Accounts"*. On January 1, 1959, benefit organizations operating under the *National Health Act* opened "special accounts", guaranteed by the Commonwealth, to which were compulsorily transferred all contributors over the age of 65 years, and to which the organizations had the right to transfer contributors with preexisting or chronic illnesses and those who had exhausted their entitlement to benefit by exceeding the maximum amount payable. Contrary to expectations, however, the refusal of the Commonwealth to allow "Fund benefit" to be paid in other than recognized hospitals deprived certain contributors of benefit, and the Commonwealth Government has now decided that, so far as medical benefits are concerned, persons over the age of 65 years are not bad risks and that from January 1, 1960, the benefit organizations will not be compelled to transfer people over that age to "special accounts". In addition, again following representations from the Federal Council and the benefit organizations, benefits will be payable to persons occupying beds in other than recognized hospitals provided the Commonwealth authorities are satisfied that the patient "was suffering from an illness or injury requiring hospital treatment of the kind provided in public hospitals" and "the treatment provided was of a standard substantially equivalent to the standard of the treatment that he would have received at a public hospital".

3. *Pharmaceutical Benefits.* The Bill to amend the *National Health Act* introduced to the Federal Parliament in October also makes provision for radical changes in relation to the provision of Pharmaceutical Benefits.

State Legislation.

1. *A Regulation under the Workers' Compensation Act.* In September, 1958, a Regulation (33A) under the *Workers' Compensation Act* was promulgated purporting to fix the fees payable by an insurer in relation to both the in-patient and out-patient treatment of injured employees. That Regulation was subsequently found to be *ultra vires* the Act, and in May, 1959, a new Regulation was gazetted fixing the fees payable for in-patient treatment in hospitals, including both public and private, at £3 per day, and for the treatment of out-patients at 30s. per visit.

When this became known, representations were immediately made to the Acting Chief Secretary and the underwriters, pointing out that there were no private beds available at £3 per day, and the underwriters agreed that they would not limit payment in private hospitals to that amount. So far as treatment of out-patients is concerned, however, the insurers have refused to pay more than 30s. to hospitals, and the result has been the suspension of the operation of "accident clinics" attached to public hospitals. Despite further representations to the Chief Secretary and to the underwriters, it has not yet been possible to find a solution to this problem.

3. *Radiation Hazards.* During the year regulations controlling the operation of irradiating apparatus, including X-ray machines, radioactive isotopes, etc., came into operation.

4. *An Amendment to the Medical Act.* Legislation to amend the *Medical Act* was passed by Parliament, empowering the Medical Board to suspend the registration of a medical practitioner who becomes a patient within the meaning of the *Mental Hygiene Act*, 1958.

5. *Cremation.* Amending legislation based on recommendations of the Commission of Public Health (acting on the advice of a Subcommittee of the Commission on which the Branch was represented), was passed and will come into operation early in 1960. The legislation is designed to impose additional safeguards in relation to the disposal of bodies by cremation.

Branch Organization.

1. *Deputy Medical Secretary.* Elsewhere in this report it will be noted that the membership of the Branch is now over 3000, and the Branch Council has decided to increase the office staff by the appointmnet of a Deputy Medical Secretary, the conditions of appointment having already been advertised. Additional clerical staff is also required and several alternative plans for the creation of additional office space at the Medical Society Hall have been under consideration during the year.

2. As both the Eastern and South-Eastern Suburban Subdivisions had become unbalanced in numbers and unwieldy in area, Council decided to form two new subdivisions—the Maroondah Subdivision being separated from the Eastern Suburban Subdivision and the Peninsula Subdivision from the South-Eastern Suburban Subdivision. The geographic boundaries of the new subdivisions have been determined and steps taken to enable the members in those areas to appoint Council and Convocation representatives for 1960.

Relationship with the Home Association.

The State Branches of the British Medical Association in Australia, while virtually autonomous, are still an integral part of the Association as a whole, governed by the constitution of the Home Association. Two consequences flow from that relationship—every member of the Association throughout the world must receive a copy of the *British Medical Journal* each week, and a capitation payment must be paid to the London office. For many years the overseas subscription *per capita* has been £2 2s., less a rebate of 10s. 6d. The Home Association carried the loss on exchange and, therefore, £A1 11s. 6d. per member was remitted to London each year. At the Annual Representative Meeting in Edinburgh this year the subscription of members in Great Britain was increased and the overseas subscription raised to £E2 12s. 6d. Allowing for a rebate of 10s. 6d., the Victorian Branch is now committed to pay to London £E2 2s. per member, which will increase the total from approximately £4900 to approximately £A8440 for 1960.

Entirely unrelated to the question of the payment of overseas subscription, there has for some years been a growing feeling that an Australian Medical Association should be formed, affiliated with the British Medical Association as are the Canadian and South African Medical Associations. This feeling is not confined to Australia, but is supported in Britain itself, and, should an Australian

Medical Association be formed, it will be done with the greatest goodwill both inside and outside Australia. The Federal Council has resolved, "That in the opinion of the Federal Council the time is now opportune to proceed with the formation of an Australian Medical Association, independent of, but affiliated with, the British Medical Association", and as a fundamental question of policy is involved, the Branch Council will seek the views of members at a meeting of Branch Convocation to be held early in 1960.

Medical Liaison Committee with the State Health Department.

The Liaison Committee with the State Health Department, appointed in 1957 to consider the activities of the Department, and particularly their relationship to private practice, has completed its investigation and submitted a report to the Minister of Health. The Committee was satisfied that, in general, the activities of the several branches of the Health Department were quite properly the responsibility of Government, and did not unreasonably impinge on the existing system of medical practice, but some reservations were made regarding the work of the Mental Hygiene Authority and the Cancer Institute.

Medical Services to the Community.

In 1955 a Special Committee of Council prepared a report on the medical needs of the community, and forecast a shortage of doctors in Victoria, resulting partly from the imposition of a quota in the Medical School in the University of Melbourne and for other reasons, including population growth and extension of salaried services in Government Departments and hospitals. That forecast has been borne out by the present situation in this State, where the demand for medical practitioners has been met only by registration of graduates from overseas. The position is again under examination by an ad-hoc committee.

The Problem of Road Accidents.

The report of the Special Committee referred to in the annual report for 1958 was completed and forwarded to the Minister of Health. Subsequently it received a great deal of publicity in the Press, particularly those sections dealing with the relationship of alcohol and accidents. Evidence was also submitted to the Select Committee of the Senate investigating the road accident problem and to the Royal Commission on Third Party Insurance. To the latter it was submitted that a special fund should be established, from which payments would be made for medical services to road accident victims, irrespective of proof of negligence on the part of the driver concerned.

Special Articles for the Press.

During the year the activities of the Information Service Subcommittee of the Branch Council continued, and several special articles and letters were prepared for publication in both metropolitan and country newspapers, some concerning public health and preventive medicine and others relating to medico-political matters.

Medical Art Group.

Although not established as a formal Section of the Branch, a number of interested members formed a "Medical Art Group" during the year.

Numerous other matters have been dealt with by both the Branch Council and the Executive in addition to the above. A great deal of business referred to, and arising from the activities of the Federal Council has not been recorded here, as full reports of the meetings of the Federal Council appear in THE MEDICAL JOURNAL OF AUSTRALIA.

Federal Council.

The Federal Council met in Sydney in March and in Brisbane in September. Full reports of the proceedings of the meetings have been published in the issues of THE MEDICAL JOURNAL OF AUSTRALIA of May 16 and November 14, 1959.

The Library of the Medical Society of Victoria.

Membership of the Advisory Committee remains the same, and meetings have been held each month throughout the year.

Loans from the library were slightly fewer than the previous year, being approximately 2400, of which 2025 were to members direct and the remainder to libraries in Melbourne and interstate. Books and journals borrowed from other libraries totalled 240.

One hundred and ninety new books have been added to the library. Sixty were purchased through recommendation of the Committee; seventy-three were donated by THE MEDICAL JOURNAL OF AUSTRALIA, and the balance were gifts from members and exchanges from H. K. Lewis's lending library. New journal titles are: *Israel Medical Journal* (donated by the Israel Medical Association), *British Journal of Industrial Medicine*, and *Histoire de la Médecine*.

More country members are making use of the library, though the numbers are still few, and perhaps more publicity could be given to the facilities available. A few members of the Tasmanian Branch borrow books and journals.

At each meeting the Committees consider two or three shelves of books in the older section of the library. Those having historical value are transferred to the Museum, and the others discarded through the Central Medical Library Organization. Many unbound and broken series of journals which have been donated to the library have been transferred to the University because of storage difficulties. These are available for loan at any time.

During the year much consideration was given to possible alterations in shelving and layout of the library and an improvement in the lighting and heating systems. An architect specializing in this type of work was consulted, but his total plan as submitted was considered too extensive and costly in present circumstances; a modification was approved with improvement of the lighting. However, this is in abeyance for the present until Council has decided on plans for the building as a whole.

The possibility of a translation service was also investigated, and it was hoped to have one established through the Central Medical Library Organization, whereby members of the medical profession could obtain quick and inexpensive translation of scientific papers. The result was disappointing, and it does not seem possible to further the project at present. The Medical School at the University experiences great difficulty in having articles translated, and the expense is considerable.

The matter of a printed catalogue was discussed, but the Committee eventually decided against it in view of the labour necessary to compile and the cost of publishing. It was felt the money could be used to better advantage.

The Committee wishes to record appreciation of gifts from The British Medical Insurance Company, THE MEDICAL JOURNAL OF AUSTRALIA, The National Tuberculosis Association, Dr. Lucy Bryce, Dr. S. G. L. Catchlove, Dr. K. D. Fairley, Dr. Mary Kent-Hughes, Dr. E. N. Kurrle, Dr. Elizabeth McComas, Dr. J. R. McGoldrick, Dr. L. J. C. Mitchell, Dr. W. H. Moore, Dr. B. Robinson, Dr. G. Simpson, Dr. D. Pitt, Sir William Upjohn, Dr. R. Wettenhall and Dr. J. C. Zwar.

V. L. COLLINS,
Honorary Librarian.

Museum.

The past year has been chiefly notable for the consolidation of the indexes relating to the history of Australian medicine. The file of Australian medico-historical reprints is now extensive, especially as a number of items from non-medical sources have been acquired. All these papers are exhaustively cross-indexed, as are all the known papers on Australian medical history, even if not available themselves in the Museum. A start has been made on recording references to doctors, medical practice and socio-medical problems in the non-medical literature. Although it will be an unending task, it is an essential one, because strictly medical records virtually do not exist for the period before 1855, and non-medical sources are thus of special importance. Members who come across medical references in the course of general reading, especially of nineteenth century Australiana, are asked to note them for the Curator. A magnificent collection comprising perhaps 2000 references was given the Museum by Professor J. B. Cleland, of Adelaide.

A further generous donation from the British Medical Insurance Company has enabled us to retain the invaluable help of Miss Ann Tovell. She has recently completed a list of references to Australian medical practice in British medical journals prior to 1880. The list comprises over 600 items and is being indexed prior to publication. Concentration on work of this kind has meant that little progress has been made with the identification and display of instruments.

Inquiries from abroad, and correspondence, both overseas and interstate, have yielded information of value and in one instance a useful exchange has been arranged. Recent

advice from London suggests that it may be possible to trace some of the logs of surgeons of convict and emigrant ships, together with other data relating to the medical arrangements for these ships.

The liaison with the Library Advisory Committee has made it possible to add some valuable items of early medical Australiana to the collection. It is doubtful whether it will ever be possible to make up for the losses and wastage of earlier years, but even so the collection compares very favourably with that of other medical libraries.

The museum is indebted to several members for gifts during the past year; donors include Dr. R. R. Wettenhall, Dr. G. Simpson, Dr. W. W. S. Johnston, Dr. Colin Macdonald, Dr. W. D. L. Farrer, Dr. F. Forster, Dr. Mary Kent-Hughes, Mr. John Zwar, Dr. H. Boyd Graham and Dr. W. Summons, whilst others have kindly provided photographs, reprints or photostats of papers out of print. It is hoped that with the return of Dr. D. M. O'Sullivan from overseas, progress will be made with the filing and identification of the photographic holdings.

The Museum archives and indexes now form a source of reference which the student of Australian medical history cannot afford to ignore. The continued development of the collections themselves, however, must remain dependent on gifts from members. May we ask that a search be made in attics and trunks for old manuscripts, books, pamphlets, newspapers, letters, photographs and instruments? Rubbish will be gladly accepted and disposed of only after careful study.

BRYAN GANDEVIA,
Honorary Curator.

Reports of Subdivisions.

Metropolitan.

South Central.—Office-bearers: Branch Council representative, Dr. J. Gavin Johnson; Chairman, Dr. James Smibert; Honorary Secretary, Dr. L. W. Knight.

The South Central Suburban Subdivision held one meeting at which the office-bearers were elected. This meeting took place on December 2, 1958, and the following was the agenda: 1.—Welcome to Dr. G. R. Weigall to subdivision; 2.—Congratulations to Dr. Gavin Johnson on presidency; 3.—Matters arising from minutes; 4.—Outline of changes in repatriation arrangements; 5.—General business.

LINDSEY W. KNIGHT,
Honorary Secretary.

South-Eastern.—Office-bearers: Branch Council representative, Dr. A. W. Burton; Chairman, Dr. Roderick Thomson; Vice-Chairmen, Dr. James Best and Dr. M. J. Lindsey; Honorary Secretary, Dr. John McCarthy.

A general meeting of the subdivision was held on August 20, 1959, and 18 members attended. After the election of office-bearers the meeting expressed appreciation of the work of the retiring Secretary, Dr. G. W. Patterson. The Council representative, Dr. A. W. Burton, advised members of the decision of the Branch Council to divide the subdivision into the South-Eastern Subdivision and the Peninsula Subdivision. He also spoke on workers' compensation and the formation of an Australian Medical Association, and these subjects were then discussed by the meeting. Dr. Roderick Thomson deplored the Government's handling of the distribution of Salk vaccine and brought up the question of restriction of hospital benefits. Dissatisfaction with the proposed amendments to the National Health Service was expressed, but no motion was put.

JOHN MCCARTHY,
Honorary Secretary.

Eastern.—Office-bearers: Branch Council representative, Dr. H. G. Judkins; Chairman, Dr. J. G. McMahon; Honorary Secretary, Dr. W. Austin Cooper.

On Friday, July 24, 1959, a meeting of the subdivision was held at St. George's Hospital, with Dr. A. S. Ferguson presiding. The office-bearers were elected. Dr. Ferguson and Dr. H. J. Hosking, having held the offices of Chairman and Honorary Secretary respectively for several years, did not offer for reelection. Dr. C. H. Dickson addressed the meeting and answered questions regarding the *Workers' Compensation Act*. Talks on "Aspects of Cæsarean Section" were given by members of the honorary Obstetrical staff at St. George's Hospital.

W. AUSTIN COOPER,
Honorary Secretary.

Western.—Office-bearers: Branch Council representative, Dr. Norman L. Dodd; Chairman, Dr. Norman L. Dodd; Honorary Secretary, Dr. Donald D. Coutts.

Three meetings of the subdivision were held during the year: in March at Footscray, in June at Essendon and in September at Williamstown. These were well attended, and it has now been decided to hold a meeting every three months—at Footscray, Essendon, Williamstown and Sunshine (in this order).

DONALD D. COUTTS,
Honorary Secretary.

Country.

North-Western.—Office-bearers: Branch Council representative, Dr. B. Hutton-Jones; substitute representatives, Dr. A. Hinchley and Dr. Ross Webster; Chairman, Dr. G. Forsyth; Honorary Secretary, Dr. Ross Webster.

A combined scientific and social meeting was conducted at Horsham on Saturday, July 18. In the afternoon Dr. Ian Wood lectured on "Jaundice". This lecture and the stimulating discussion which followed it were thoroughly enjoyed by all members present. Late in the afternoon Dr. J. Gavin Johnson, President of the Branch, gave a short talk on current B.M.A. activities and problems. The social side of the meeting commenced with a cocktail party for members and wives, following which all were entertained at dinner, at which the guest of honour was Sir William Upjohn, whose after-dinner speech was entitled "The Time has Come the Walrus said". This function, which was similar to that held last year, was again most successful, and there were more than sixty present at the dinner. All members were very grateful to Sir William Upjohn, Dr. Wood and Dr. Johnson, who contributed so much to the success of the meeting.

Three post-graduate meetings have been held in the subdivision this year, at Warracknabeal in March, Mildura in September and Horsham in October. All have been well attended, and once again our thanks are recorded to the Melbourne Medical Post-Graduate Committee for arranging the lectures.

ROSS WEBSTER,
Honorary Secretary.

Ballarat.—Office-bearers: Branch Council representative, Dr. M. H. Robinson; substitute representatives, Dr. N. F. Pescott and Dr. F. P. McArdle; Chairman, Dr. D. A. Alexander; Vice-Chairman, Dr. N. F. Pescott; Honorary Treasurer, Dr. Kingsley Porter; Honorary Secretary, Dr. Ian Goy; local Council members, Dr. W. R. Griffiths and Dr. W. L. Jenkins.

The annual meeting and annual dinner were held at Craig's Hotel on September 25, 1958. Forty-three members of the subdivision were present. After the election of office-bearers, Sir William Upjohn gave a very interesting talk on early Victorian history, with special reference to Ballarat.

Four post-graduate lectures were held during the year at approximately three monthly intervals. These were as follows: April, Professor R. R. H. Lovell, "Current Concepts of Steroid Therapy"; June, Dr. Ian McDonald, "Dysmenorrhœa and Hormones in Gynæcology"; August, Dr. S. W. Williams, "Recent Trends in Antibiotic Therapy"; November, Mr. G. Newman-Morris, "Bleeding from the Nipple and other Breast Conditions".

In February, Professor W. C. Gissane, Sims Travelling Professor for 1959, gave a very interesting lecture on the "Treatment of Burns".

Several subdivisional council meetings concerning matters of local and general interest were also held.

I. C. GOY,
Honorary Secretary.

South-Western.—Office-bearers: Branch Council representative, Dr. W. R. Angus; substitute representatives, Dr. B. S. Alderson and Dr. L. T. Griffiths; Chairman, B. D. Vaughan; Vice-Chairmen, Dr. J. K. Gardner and Dr. A. D. Matheson; Honorary Secretary, Dr. R. R. Sobey; Committee, Dr. S. C. Fitzpatrick, Dr. R. A. MacDougall, Dr. H. C. Maling, Dr. W. M. Davies and Dr. W. R. Angus.

During the past twelve months four meetings have been held. These have taken the usual form of: (*a*) A business meeting of the subdivision, in which general business of interest to members locally, and items of interest and importance to B.M.A. members generally are discussed. Our Council Representative and substitute representatives have been most helpful at these meetings in transmitting our views to Branch Council and informing us of Council activities. (*b*) A scientific meeting follows the business

meeting and takes the form of two lectures arranged by the Melbourne Post-Graduate Committee. These maintain the usual excellent standard, and are always greatly appreciated, not only for the material in the lectures, but for the personal contacts made by men at the periphery with their fellows working in more specialized spheres. (c) A dinner, usually preceded by a cocktail party. These social activities are also valuable means of promoting contact between members.

A Branch Meeting was held in the subdivision in April. The President of the Victorian Branch, Dr. Gavin Johnson, was in the chair. Subdivision members are very appreciative of these Branch meetings in country centres, and of the time spent by the President and Medical Secretary and other members in attending them. Dr. Johnson spoke at this meeting about recent discussions with the Parent Branch. Dr. Leslie Hurley lectured on "Pyrexia of Obscure Origin".

R. R. SOBEY,
Honorary Secretary.

Goulburn.—Office-bearers: Branch Council representative, Dr. D. F. Lally; Chairman, Dr. J. B. McMiken; Honorary Secretary, Dr. Brian Schloeffel; Treasurer. Dr. Mark Roche.

Two lecture series were again held during the year, under the auspices of the Melbourne Medical Post-Graduate Committee—once again highly successful, instructive and enjoyable in every aspect. On each occasion, a buffet dinner was held at the new Victoria Hotel in Shepparton—for the first time in modern surroundings and the comforts of air conditioning, which seemed to enhance the mood of all present. Again, for the first time, on each occasion the wives of members were invited to be present. The Lectures Series were: November 22, 1958, Dr. Ian Stahle, "Dermatological Digest", Dr. John Game, "Subarachnoid Hæmorrhage"; March 14, 1959, Dr. Ian Wood, "Jaundice and Late Sequelæ", Mr. R. S. Lawson, "Recurrent Inguinal Hernia". On October 25, 1958, for the first time on such a scale, the Goulburn Subdivision joined with the Goulburn Valley Law Association in a combined venture, which again proved to be an enjoyable success. This was held at the Victoria Hotel. An address of mutual interest was given by Judge Dethridge, Chairman of the Workers' Compensation Board, on the subject of "Workers' Compensation". A dinner dance followed, which we feel sure has since then made each profession more tolerant and understanding of the other. The attendance was in the vicinity of 100. Guests included the Chief Secretary, Mr. Rylah, Sir Norman O'Bryan, of the Supreme Court, and Judge Norris. It is hoped that a Medico-Legal Society in the Goulburn Region will be the end result in the not too distant future.

BRIAN SCHLOEFFEL,
Honorary Secretary.

Gippsland.—Office-bearers: Branch Council representative, Dr. D. F. Mitchell; substitute representatives, Dr. A. A. Crook and Dr. W. G. Birks; Chairman, Dr. J. Moore Andrew; Honorary Secretary, Dr. John E. Joseph.

On October 11, 1958, a meeting was held at the Traralgon and District Hospital. Lectures were given in the afternoon by Mr. J. I. Hayward, who spoke on "Surgery of Chest Injuries", and Dr. T. T. Currie, who lectured on "Anæsthetic Emergencies and Anæsthesia of Chest Injuries". The latter lecture was illustrated with a splendid film on 'Cardiac Arrest", which is distributed by compliments of Imperial Chemical Industries. In the evening Dr. M. V. Clarke, Mr. Hayward and Dr. Currie formed a panel and answered questions.

On February 14, 1959, at the West Gippsland Hospital, Warragul, Mr. F. W. Connaughton presented a lecture on "Varicose Veins" and Mr. E. S. R. Hughes spoke on "Surgery of the Anus and Rectum". In the evening the lecturers formed a panel and replied to questions on surgery.

On February 28, 1959, a special meeting of the Gippsland Subdivision was held at the Latrobe Valley Community Hospital, Yallourn. Dr. C. H. Dickson attended. The subject of the meeting concerned the policy of direct payment of medical fees by benefit organizations to medical practitioners.

On May 9, 1959, a meeting was held at the Gippsland Base Hospital, Sale. In the afternoon Dr. Elizabeth Turner lectured on "Neonatal Jaundice" and Mr. Russell Howard on "Surgery of Congenital Abnormalities". At a dinner lecture Dr. Frank Forster and Dr. Bryan Gandevia, representing the Section of Medical History of the Branch, gave two short talks on "Mr. Ewing—First Surgeon of Flooding Creek". In the evening, after a film on the University Appeal presented by Dr. W. W. S. Johnston, Dr. V. L. Collins gave a lecture on "The Newborn Infant—Normal and Abnormal". Later Dr. Collins, Mr. Howard and Dr. Turner formed a panel to answer questions.

On June 20, 1959, a Victorian Branch Meeting was held at the West Gippsland Hospital, Warragul. In the afternoon cases for discussion were presented by the visiting medical officers of the West Gippsland Hospital. After dinner at the Club Hotel, Warragul, Dr. E. Wilder, Pathologist of the Gippsland Regional Pathology Service, presented a paper on "Carcinoma of the Cervix—Prevention and Diagnosis".

On August 8, 1959, the Melbourne Medical Post-Graduate Committee presented a series of lectures at the Yallourn Hospital. In the afternoon Dr. M. Forrest gave a lecture on "Infertility", and Dr. E. V. Mackay lectured on "Ante-natal Care with Special Reference to Anæmia, Diabetes and Hypertension". In the evening Dr. R. F. Zacharin lectured on "Stress Incontinence". Later the three lecturers combined to form a quiz panel to answer questions on obstetrics and gynæcology.

JOHN E. JOSEPH,
Honorary Secretary.

Geelong.—Office-bearers: Branch Council representative, Dr. G. C. Darby; substitute representatives, Dr. M. W. Morris and Dr. E. I. Fargie; Chairman, Dr. E. I. Fargie; Vice-Chairmen, Dr. H. R. Millikan and Dr. V. D. Plueckhahn; Honorary Secretary, Dr. K. J. Coleman; Honorary Treasurer, Dr. J. W. Bishop; Assistant Secretary, Dr. B. H. Guaran.

The annual general meeting was held on August 12, 1959, when the new office-bearers were elected.

Four business meetings were held during the year, with an average attendance of 25 members. Eight meetings of the full committee were held.

A Branch meeting was held on August 15, 1959. Fourteen local members demonstrated clinical cases in the Pathology Department of the Geelong and District Hospital during the early afternoon. Following afternoon tea, a short talk was given by Dr. A. Newell in the Lecture Hall on the "Present Status of Oral Antidiabetic Therapy". This was followed by a symposium on "The Obscure Painless Jaundice and its Diagnosis". The speakers were Dr. J. M. Agar, Mr. A. R. Waterhouse and Dr. V. D. Plueckhahn. In the evening 116 members and wives attended a cocktail party and dinner at the Carlton Hotel. The guest speaker was Professor Zelman Cowen, who spoke on "Ghana".

In February, 60 local members and wives were entertained at a buffet dinner at the Shell Refinery, Corio.

The fifth annual dinner-dance of the subdivision was held at Aberdeen House in September. This is becoming an awaited annual feature.

V. D. PLUECKHAHN,
Honorary Secretary.

Reports of Sections.

Section of Clinical Pathology.—Office-bearers: President, Dr. D. C. Cowling; Honorary Secretary, Dr. R. A. Barter; Honorary Treasurer, Dr. S. O. M. Were; Committee, Dr. M. P. K. Shoobridge and Dr. S. Menzies.

Meetings were held each quarter during the year, when the following papers were read: Dr. G. S. Hale, "Trephine Marrow Biopsy"; Dr. G. J. V. Nossal, "Studies on Genetics in Immunity"; Dr. D. Metcalf, "The Mouse Leukæmia Viruses"; Dr. R. Jakobowicz, "Recent Developments in Blood Group Serology"; Dr. G. C. de Gruchy, "Recent Developments in Hæmatology"; Dr. John Owen, "Serum Haptoglobins"; Dr. Ross Anderson, "The Pathology of Cerebro-Vascular Accidents"; Mr. I. Parsons, "Leucocyte Alkaline Phosphatase in the Myelo-Proliferative Diseases"; Dr. R. G. Wyllie, "Neutrophil Leucocyte Alkaline Phosphatase in Acute Inflammation and Myocardial Infarction".

R. A. BARTER,
Honorary Secretary.

Australian Rheumatism Association (Victorian Group).—Office-bearers: Chairman, Dr. W. McI. Rose; Honorary Secretary, Dr. R. F. A. Strang; Honorary Treasurer, Dr. L. Wedlick; Delegates to Australian Council, Dr. G. McEwen, Dr. L. Wedlick, Dr. R. F. A. Strang and Dr. F. May.

Council meetings were held on August 21, 1958, February 5, April 28, June 10 (at which Dr. Ray Robinson (Sydney), Secretary of the Australian Rheumatism Association, was present to discuss plans for the Annual Meeting of the Australian body to be held in Melbourne on October 16-17, 1959), and on July 20, 1959.

Business dealt with included:

Selection of delegates to the Australian body: Dr. McEwen, Dr. Kelly, Dr. Wedlick and Dr. Strang.

Consideration of a letter from Dr. M. Kelly published in THE MEDICAL JOURNAL OF AUSTRALIA, December 27, 1958, criticizing the Victorian Group, in reply to which a letter was sent to Dr. Kelly and the Editor of THE MEDICAL JOURNAL OF AUSTRALIA stating the facts concerning the foundation of the Group and the meetings held.

Programme for a scientific session in March.

A communication from Dr. M. Kelly re Institute of Rheumatology.

Programme for the Australian meeting in October.

The resignation of Professor Lovell, which was received with regret.

An offer to read a paper from Dr. Neff of California on "Low Back Pain", which could not be accepted as the time of his visit was not suitable.

The election of new members: Dr. John Webb, Dr. Phillip Lewis and Dr. John Taylor, whom we heartily welcome.

Resignations were received from Dr. John Grove and Sir Ralph Whishaw.

The resignation of Dr. M. Kelly from membership of the Council and as Treasurer.

The appointment of Dr. Strang as acting Treasurer.

The scientific session was a panel discussion of the "Lupus Phenomenon in Arthritis" and the guest speakers were Dr. Ian McKay and Dr. Kurt Schwarz, whom we thank for their stimulating papers.

Membership consists of 23 full members and six associate members.

Papers so far offered for the Australian meeting include "The Use of Chloroquine", "The Differential Agglutination Titre", "Trauma and Rheumatoid Arthritis", "Tyrosine and Phenylalanine Metabolism in Collagen Diseases", "Osteoporosis", and "A Heart Joint Syndrome in Calves'.

R. F. A. STRANG,
Honorary Secretary.

Section of Medical History.—Office-bearers: President, Professor K. F. Russell; Honorary Treasurer, Mr. J. F. Hueston; Honorary Secretary, Dr. M. L. Verso.

During the year the Honorary Treasurer, Dr. John Birrell resigned from office because of other commitments, and at the annual meeting a vote of thanks to him for his services was passed by the members. His successor as Treasurer is Mr. J. Hueston.

Five meetings have been held, at which the papers ranged over many aspects of medical history. In addition to the papers read by members, several were read by outside speakers and the section is very grateful to all who made contributions in this way. The February meeting was called at short notice to take advantage of the presence in Australia of Dr. Edward Renbourn, Director of the Physiological Establishment of the Ministry of Supply. Dr. Renbourn spoke about certain historical aspects of climatology, a subject on which he is an acknowledged authority. The complete list of papers presented during the year is as follows:

December 8, 1958: "Sir Charles Ryan", by Mrs. R. G. Casey; February 24, 1959: "The Chills of Damp Cold, an Historical Survey", by Dr. E. Renbourne; April 13, 1959: "The Life of Baron Dupuytren", by M. J. Hueston; June 8, 1959: "The Symbolism of the Caduceus", by Dr. Bruce Robinson; September 14, 1959: "The Pathological Drawings of William Clift", by Professor K. Russell, "Progress of the Museum in Recent Years", by Dr. Bryan Gandevia, "Samuel Merriman's Obstetric Case Histories", by Dr. Frank Forster.

An innovation during the year was the introduction of an annual prize for the best essay by a medical student on some aspect of medical history. The winner was Mr. Ian Siggins with an essay entitled "Medicine in Ancient Egypt".

M. L. VERSO,
Honorary Secretary.

Ophthalmological Society of Australia, Victorian Section.—Office-bearers: President, Dr. J. B. Foster; Honorary Treasurer, Dr. P. H. Cowen; Honorary Secretary, Dr. S. Troski.

Four meetings have been held this year and two films have been shown, the latter being: (i) "The Treatment of Cardiac Arrest", kindly supplied by I.C.I. A discussion followed, led by Mr. E. E. Dunlop; (ii) "The Development of the Eye', from the archives of the O.S.A.

A panel discussion was held to discuss local experience with the use of chymotrypsin in cataract surgery.

Two members who have returned from tours abroad have addressed the Society on newer developments in equipment and organization.

In matters of visual hygiene, the Victorian Section is cooperating with the child health authorities in selection of children for partially sighted schools. Cooperation or the society was also given in drafting the new regulations for visual standards for licensed drivers.

S. TROSKI,
Honorary Secretary.

Oto-laryngological Society of Australia (Victorian Division).—Office-bearers: President, Dr. Jean Littlejohn; Vice President, Dr. R. H. Stevens; Committeeman, Dr. Heyworth Watson; Honorary Treasurer, Dr. R. C. Willis; Honorary Secretary, Dr. D. F. Cossar.

Several clinical meetings were held at the teaching hospitals during the year.

The annual meeting of the society was held in Sydney in August, and was well attended by members from all States. The annual general meeting for 1960 will be held in Melbourne.

DAVID F. COSSAR,
Honorary Secretary.

Section of Preventive Medicine.—Office-bearers: Chairman, Dr. J. A. Forbes; Honorary Secretary, Dr. D. W. Rankin; Committee, Dr. S. G. Anderson, Dr. A. A. Ferris, Dr. P. Gilbert.

The annual general meeting for 1958 was held on November 13, 1958, when the office-bearers were elected.

Meetings were held throughout the year. Speakers and their subjects were as follows: November 13, 1958: "Impressions of the International Cancer Congress", Sir Macfarlane Burnet; March 12, 1959: "A Study of Lesions Attributable to Alcoholic Malnutrition in our Community", Dr. Ian Mackay; May 28, 1959: "Goitre and Goitrogens", Dr. F. Clements; July 9, 1959: "Food Contamination and Food Control", Dr. B. Feery; September 10, 1959; "Enteric Viruses in a Semi-Closed Community", Dr. A. Ferris.

D. W. RANKIN,
Honorary Secretary.

On behalf of the Branch Council,

J. GAVIN JOHNSON,
President.

K. E. RATTEN,
Honorary Secretary.

C. H. DICKSON,
Medical Secretary.

This annual report should not be concluded without an expression of appreciation of the loyal service rendered the Association by the Medical Secretary, Dr. C. H. Dickson, the Assistant Secretary, Miss Corley, and all members of the staff. It has been a difficult year because of an ever-increasing volume of matters requiring attention and shortages of staff, which at times have become acute. In spite of these difficulties the seemingly impossible has often been achieved with loyal efficiency, and without complaint. Our staff has earned our gratitude.

J. GAVIN JOHNSON,
President.

Addendum.

The following reports are published on behalf of:

The Melbourne Medical Post-Graduate Committee.

The Melbourne Medical Post-Graduate Committee is composed of representatives of most of the organizations concerned with post-graduate education, members being elected annually. This year the Victorian State Committee of the Royal Australasian College of Surgeons and the Anti-Cancer Council of Victoria have been represented for the first time.

During the year, discussions have taken place with representatives of the University of Melbourne to determine whether the Committee should become a Committee of the University, as is the case in most of the other States of Australia. No decision has as yet been reached on this matter.

The Committee has continued to arrange courses of instruction for candidates for higher qualifications and for doctors who do not intend to sit for examinations.

Courses for Post-Graduate Qualifications.—Courses in the basic sciences were arranged with the appropriate departments at the University. These courses are conducted over a period of about six months, several afternoons a week being used.

At the request of the Post-Graduate Committee, the honorary medical staff of St. Vincent's Hospital conducted a course in general medicine, suitable for candidates for M.D. Part II and the M.R.A.C.P. examinations. The Committee provided administrative assistance.

This year, the Victorian Committee of the Royal Australasian College of Surgeons conducted a course in surgery suitable for candidates for the final F.R.A.C.S. examination, and this replaced the course previously conducted for the Post-Graduate Committee.

The Post-Graduate Committee also provided administrative assistance for the course conducted by the Australasian Association of Psychiatrists, Victorian Branch, in psychiatry.

Metropolitan Refresher Courses.—General refresher courses in medicine and surgery were held over a period of a week on two occasions, the staff of Prince Henry's Hospital providing the first and the staff of the Royal Melbourne Hospital the second, for the Committee.

Refresher courses in obstetrics and gynæcology were held in February and September at The Royal Women's Hospital, each over a period of two weeks.

The staff of the Royal Children's Hospital held a post-graduate week in September, attended by school medical officers and many other doctors. Again, the Committee provided administrative assistance.

Country Courses.—Twenty-four country courses were arranged in Victoria for 1959. In addition, in collaboration with the Sydney Post-Graduate Committee, a course of lectures was arranged at Albury.

Cancer Education.—With the financial support of the Anti-Cancer Council of Victoria, the Committee has arranged special lectures on cancer topics and more are to be held. Over three hundred doctors attended a symposium on cancer of the breast held in July at the University. A second symposium will be held in November at the Royal Melbourne Hospital, the subject being cancer of the cervix uteri.

In August, Professor R. P. Jepson, Professor of Surgery in the University of Adelaide, delivered a lecture on carcinoma of the thyroid.

Overseas Lecturers.—The following visitors from overseas gave lectures for the Committee: Professor R. F. Farquharson, of Toronto; Professor Robert Kark, of Chicago; Professor Alan Johnstone, of Leeds; Professor Sir Stanley Davidson, of Edinburgh; Sir Horace Smirk, of Otago; Dr. A. Rae Gilchrist, of Edinburgh; Dr. L. T. Hilliard, of London; Mr. W. Gissane, of Birmingham.

In addition further lectures will be given by Dr. John Nabarro, of London, Mr. H. Osmond-Clark, of London, Professor Jethro Gough, of Cardiff.

Recorded Lectures.—Through the generosity of Nicholas Pty. Ltd., the Committee has been able to record lectures on microgroove disks, with accompanying slide illustrations, by the following overseas visitors: Professor Alan Johnstone, Mr. W. Gissane, Dr. A. R. Gilchrist, Professor R. F. Farquharson, and by three lecturers who visited Melbourne late in 1958, Dr. Alice Stewart, Dr. Marjory Warren and Dr. A. Austin Eagger. Recordings were also made of the two lectures by Professor Robert Kark and of the cancer programmes. These recordings are available to groups of doctors or individuals, preference being given to country practitioners.

Other Activities.—The Committee has continued to arrange for the overseas training of doctors proceeding to the United Kingdom and America. Individual courses of instruction and clinical work in Melbourne hospitals have been arranged for a number of graduates. The Committee's delegates have attended the two meetings of the Australian Post-Graduate Federation in Medicine.

Summary of Training.—The following figures indicate the number of doctors who have availed themselves of the facilities offered by the Committee in 1959:

Total number of enrolments for courses and clinics	887
Numbers attending courses for higher qualifications	164
Numbers attending country courses (on reports received)	195
Numbers attending metropolitan refresher courses	116
Number of individual doctors who have attended courses by overseas lecturers	170
Number of doctors attending cancer instruction	365
Number of doctors for whom the Committee has arranged training overseas	48
Annual subscribers	592

Most of these figures will have increased by the time training programmes for the year end.

Finance.—The financial position of the Committee has continued to be a matter for concern, and the support of all doctors in Victoria is sought. Repeated approaches to the State Government have been made in an effort to obtain an increased grant, so far without success.

Acknowledgements.—The Committee thanks the lecturers who took part in its courses during the year. It also expresses thanks to the deans and members of the clinical schools of the teaching hospitals and to members of the departments of the University of Melbourne for their assistance in carrying out the programme for 1959. It is also grateful for various donations made by members of the profession.

The Committee thanks Nicholas Pty. Ltd. for financial help in the recording of lectures, Parke Davis for the printing of diary cards, and Pfizer Pty. Ltd. for financial sponsorship of the visit of Dr. Robert Kark.

The British Medical Insurance Company of Victoria Limited.

The annual report of the company was submitted, over the signature of the Chairman, Dr. W. W. S. Johnston, at the ordinary general meeting on August 10, 1959. The following is a summary of the Report:

The directors have pleasure in submitting for your approval the balance sheet, profit and loss account and appropriation account for the twelve months ended April 30, 1959.

The results of the year's operations (as disclosed in the profit and loss account) have not, in the opinion of the directors, been materially affected by any items of an abnormal character. The total premiums written for the year were £124,867, as compared with £120,522 last year. Net profit for the year was £10,637 0s. 1d. after providing £5500 for taxation. The appropriation account shows that £1866 was allocated during the year to various institutions connected with the medical profession.

Up to date the company has given books to the value of £3185 and £15,475 in cash to the Medical Society of Victoria, and more than £5099 to various sub-branches of the British Medical Association and other institutions connected with the medical profession. It has also taken up debentures of the Medical Society to the value of £2500, upon which it is accepting interest at the rate of only 1% per *annum*, which, of course, saves the Medical Society a considerable sum in interest.

The company has made the following loans to the Medical Society of Victoria: £3150 to finance a building purchase, £3000 to finance the purchase of an estate agency, £10,000 to finance the purchase of property at 15-17 Lansdowne Street, East Melbourne.

The directors feel that members of the British Medical Association will be interested to know of the benefits they have received through the activities of the company, and feel sure that the knowledge will strengthen the already solid support given by the profession.

British Medical Agency Victoria Proprietary Limited.

The year just completed was the most successful in the history of the British Medical Agency. More practices changed hands than for many recent years, and several new owners engaged the Agency to act as managing agent for professional buildings in Collins Street, St. Kilda Road and East Melbourne.

Practices in the country are only sold when the vendor offers most attractive terms, such as deposits as low as

£500 and repayments of no more than £500 a year, and in some cases interest free for the first two or three years.

The continued growth of the metropolitan area has resulted in many doctors commencing practice on their own account in the new suburbs.

While there were periods during the year when general practitioners were able to obtain a locum on demand, during the holiday periods the demand was greatly in excess of the supply. In view of the comparatively small number of graduates that are expected in 1959, this position will not alter.

There is a continued trend on the part of specialists from Collins Street to East Melbourne and St. Kilda Road, and with the completion of new buildings, the demand for consulting rooms is not nearly so constant.

The position regarding ships' surgeons from Melbourne to the United Kingdom is changing also, and these appointments are now relatively easy to obtain.

PRESENTATION OF GOLF TROPHIES.

The President announced the names of the winners of the golf trophies, and presented the awards, as follows: the Gerald Weigall Championship Cup, Dr. J. R. Sherwin; the David Roseby Handicap Cup, Dr. J. R. Searls; spoon for the best in-round, Dr. G. H. Briggs; spoon for the best out-round, Dr. K. Coleman.

INSTALLATION OF PRESIDENT FOR THE ENSUING YEAR.

The chair was vacated by Dr. J. Gavin Johnson, who installed Dr. H. G. Judkins as President for the ensuing year. Dr. Judkins thanked the members for his election.

PRESIDENT'S ADDRESS.

Dr. J. Gavin Johnson then delivered the retiring President's address (see page 401).

APPOINTMENT OF AUDITORS.

Messrs. J. V. M. Wood and Company were appointed auditors for the ensuing twelve months.

VOTES OF THANKS.

On behalf of the Branch, Dr. Roseby moved a vote of thanks to the following retiring members of Council: Dr. Grayton Brown, Dr. V. L. Collins, Dr. G. C. Darby, Dr. W. P. Heslop, Dr. M. O. Kent-Hughes and Dr. Leslie Williams.

Out of the Past.

THE N.S.W. ARMY MEDICAL CORPS AND THE BOER WAR.[1]

[From the *Australasian Medical Gazette*, November, 1899.]

THE offer by New South Wales of a Field Hospital with half a Bearer Company fully equipped for service in South Africa with the Imperial troops was "much appreciated and gladly accepted" by the British Government. Such a noble and altogether humanitarian offer cannot be too highly praised by friend or foe.

The Government and people of New South Wales are to be congratulated upon possessing such an efficient Army Medical Service as they have. We believe we are correct in stating that, outside the mother countries and India, there is no other British community that could put such an efficient medical unit in the field, and consequently that could make such a generous offer. The New South Wales unit consists of eight officers and eightly non-commissioned officers and men with transport for all the equipment necessary for a field hospital, officers, and half Bearer Company. In one particular, viz. that of transport, the New South Wales unit is superior to similar units in the Imperial Army. The Imperial Medical Corps depends for its transport upon the Army Transport Corps whereas the New South Wales Corps has this necessary work done by its own transport service. The unit is so fully prepared as regards officers, men, equipment and transport, that it is ready to at once proceed to its work upon debarkation at Port Elizabeth or elsewhere.

[1] From the original in the Mitchell Library, Sydney.

Correspondence.

REPORT BY THE SPECIAL MEDICAL COMMITTEE INVESTIGATING MATERNAL MORTALITY.

SIR: The "Report by the Special Medical Committee Investigating Maternal Mortality on 319 Deaths Associated with Pregnancy and Childbirth Occurring in New South Wales 1950 to 1956" is a milestone in Australian medicine. It represents the first example in Australia of a medical audit, on a comprehensive scale, of a particular aspect of patient care. It could be that this example will be followed in other fields of medicine.

The report makes only one recommendation, and that is contained in its comment that "it is evident throughout the study that increased health education is necessary to reach those mothers who are either ignorant of or indifferent to the necessity of presenting themselves for ante-natal care early in pregnancy and of following the medical advice given". Unfortunately, it does not appear from the text how common was this neglect.

The case histories presented illustrate only too vividly another aspect of this problem of maternal mortality. These histories suggest that the Committee could have made recommendations of a very different kind to the one quoted, and certainly of equal importance.

It is to be hoped that the Committee continues its work and publishes the results of its investigations yearly. This could conceivably have the effect of reducing the maternal mortality rate in New South Wales, in the not too distant future, to that already achieved in England and Wales.

Yours, etc.,

C. J. McCAFFREY.

The Royal Newcastle Hospital,
Newcastle, N.S.W.
February 22, 1960.

PERSONALITY PROBLEMS IN ANTARCTICA.

SIR: It was with great interest that I read the article by Mr. Phillip Law in your Journal (February 20, 1960). I should, however, like to comment on the problem posed by his use of the words "neuroses" and "neurotic". These days the word "neurosis' (a neurotic being a person who suffers from a neurosis) is bandied about in a nearly totally indiscriminate manner; so much so that it hardly aids communication at all.

Mr. Law speaks of "the incidence of severe mental illness . . . is very low . . . neuroses of varying degrees of severity, however, are fairly common . . . ", which clearly suggests that he is considering a "neurosis" a mental illness—a point of view accepted by most psychiatrists. But do all the behavioural patterns he describes really suggest that the subjects were suffering from a mental illness? Or, if it be accepted that they do, is it not likely that many others in the camp doing valuable work and in general favour were not also mentally ill?

Surely the point is this. These men were transported from an urban/rural way of life where there was considerable liberty of action to a desolate part of the world, cut off from all that was familiar, with little liberty and many physical privations. All these stresses are productive of some degree of anxiety, and this in turn produces adaptive behaviour (or psychological defences). Now, clearly the adaptive behaviour of some men will be socially undesirable (aggression, hypochondriasis, etc.), whereas in others this behaviour will be highly desirable (intense drive to work, being "the life and soul of the party", etc.). The former behaviour is called a neurosis or mental illness, the latter is considered quite otherwise. Is this, however, a correct manner of looking at the problem?

Lewis[1] in a scholarly article writes: "Adequacy of adaption is today the chief yardstick of mental health for many people." Later he writes (with regard to the general adaption syndrome): "In a threatened man it is common to find a variety of protective reactions, some of which are extremely pertinent, others less so and still others minimally effective. So far indeed may the reaction be from pertinence and effectiveness that they are noxious to the individual." In the same way, it can be argued, adaptive mechanisms are used by all of us from a

[1] *Brit. J. Soc.*, 1953, 4: 109.

behavioural point of view, and they include all behaviour, whether or not personally harmful, and whether or not socially acceptable. Again, Lewis writes regarding social adaption: "Here value judgements must be made, and adaption is distinguished from maladaption according as a particular valued state is favoured or jeopardized. Social adaption, by itself, is therefore rather an empty term: it must be qualified by an indication of the state desired. Consequently mental health cannot be equated with good social adaption, as many have proposed, without risk of tautology . . . ." Later, again, he speaks of psychiatry being, by consent of many authorities, concerned with "'the study of the individual as a psycho-biological organism perpetually called upon to adapt to a social environment' but unfortunately we have not an agreed touchstone for his success or failure in this inescapable exercise. Failure in it, moreover, need not betoken mental illness. One can be sociopathic without being psychopathic". Finally he states: " . . . socially approved behaviour is not usually reviewed to see if it evinces mental illness."

The problem is thus whether or not the men Mr. Law considered to manifest a neurotic illness can be endorsed on the evidence presented (unless all socially undesirable adaptive behaviour be equated with neurosis). Also, one wonders how many men not becoming overt social problems might not, on adequate investigation, prove to be properly considered as suffering from a neurotic illness. (It is a nice topic for conjecture to reflect on the possible interpretation of the desire to go away to such a spot. Without doubt, a percentage of those who apply, and a smaller percentage of those selected, for such an assignment would be considered neurotic by many clinicians.)

For all these reasons, it is suggested that communications such as that of Mr. Law regarding the incidence of mental illness, particularly the neuroses, are difficult to evaluate unless "firm operational definitions [are] formulated and adhered to steadily" (Lewis[2]). It would be better to speak of "problems of adaption" in the absence of such criteria, and not invoke concepts of illness and their incidence.

Yours, etc.,

4 Adamson Street,
Heidelberg, Victoria.
February 23, 1960.

ALLEN A. BARTHOLOMEW.

GENERAL PHARMACEUTICAL BENEFITS.

SIR: The booklet, "Notes for Medical Practitioners", published by the Department of Health at Canberra, detailing the schedules of pharmaceutical benefits which are to be operative from March 1, 1960, arrived during the week and has just been read by me.

The reaction it provoked was one of amazement and anger—amazement that in the sixth decade of the century so much therapeutic drivel should be included in a publication bearing the authorization of a Department of Health. Not, I suppose, that a listing of ancient so-called remedies is not without historical and even sentimental, nostalgic value, but to expect the long-suffering taxpayer to actually subsidize the dispensing of preparations such as dill water and gentian, to mention two among many of a vast list of useless galenicals, is surely too much.

Anger was provoked when it was realized that several potent drugs belonging to the era of scientific medicine had been omitted from the schedules, particularly drugs which are commonly used in serious and prolonged diseases. Phenylbutazone can be prescribed only for pensioners; yet there is no doubt that this drug is the drug of choice for treating gout, and is also of great use in the common and crippling rheumatoid arthritis, the latter certainly being a disease in which the sufferer requires some financial help from the community to obtain relief. Chloroquine, the use of which has indisputably led to great improvement in sufferers from rheumatoid arthritis, cannot be prescribed for this disease except presumably for pensioners. It is noted that mepacrine has now come back to the non-restricted list, and doubtless could be prescribed for rheumatoid arthritis. However, due to many fewer toxic effects, chloroquine displaced mepacrine for this purpose at least three years ago. It means that sufferers from rheumatoid arthritis will be denied a subsidy for their drug treatment with the two most effective drugs at present available. However, numerous gold preparations are listed which are of antiquarian interest only. Gold has never been shown to be of any therapeutic use in rheumatoid arthritis or in any other disease; but not only is it useless, its dangers are so great that it should never be used. Its appearance on an official list may lead the non-discerning into disaster. Reserpine is a drug of great and proven value, but is not listed at all. Most sufferers from severe hypertension are treated either with this drug alone, or more commonly it is used in conjunction with other hypotensive agents. It must be one of the most commonly prescribed and useful drugs at the present time, but it is entirely ignored in the schedules. It is not as though the three drugs I have mentioned are new. They have been used for five years and more for the purposes I have mentioned, and are certainly of proven value.

The original concept of supplying potent and expensive drugs free was a good one. If it has become necessary to make a nominal charge for drugs, then surely the drugs should be those of proven value, and expensive enough to make their purchase a financial burden to the average person. To include in the schedules useless galenical preparations and inexpensive drugs such as acetylsalicylic acid and phenobarbital, while leaving out various potent and expensive remedies, smacks of chicanery.

Yours, etc.,

A.M.P. Buildings,
Flinders Street,
Townsville, Q.
February 22, 1960.

R. A. DOUGLAS.

SIR: There has already appeared in your columns a good deal of well-justified criticism of the means used by the Government to introduce its new Pharmaceutical Benefits Scheme. However, I plead guilty to the apathy of which the greater part of the profession has been accused in this matter, and was content to suspend judgement until details of the scheme became available.

It was with considerable dismay that I perused the Schedule of Benefits in the handbook which has recently reached me. Although the Minister stated with delightful vagueness that the scheme would be broad enough to include almost all prescriptions written by doctors, the astonishing fact now emerges that none of the potent drugs which have constituted the greatest advance in psychiatric treatment in recent years is included in the Formulary. While such potent, live-saving and disease-preventing drugs as aspirin, cascara, castor oil, cold cream, menthol and *Tinctura Benzoini Composita* inhalations, olive oil and Seidlitz powders are included, chlorpromazine finds no place.

Chlorpromazine is no longer a new drug, but a very effective and indeed indispensable weapon in the psychiatrists' armamentarium. Many patients have been discharged from mental hospitals as a result of its use, and are maintained in the community by maintenance doses. Many others are, by its use at the out-patient level, prevented from having to enter hospital. Chlorpromazine to these people is as essential as insulin is to diabetics.

Exclusion of this drug from the Formulary means that many people with psychoses or severe emotional disturbances who are treated as out-patients or in private psychiatric practice must pay for this very expensive drug, one hundred 100 mg. tablets of which cost the patient £4 10s. This adds a heavy financial burden to people who are ill equipped to bear it.

It is not suggested that every new ataractic drug should be included in the Formulary as soon as it is launched on the market. However, I feel that the case for the inclusion of chlorpromazine, and perhaps such related and by now established drugs as perphenazine ("Trilafon") in the Formulary is quite unanswerable. Its exclusion suggests that the persons responsible for compiling the Formulary, however high their academic qualifications, have no contact at all with the realities of current psychiatric practice, and that their attitude is akin to the unfortunate tendency of a proportion of the community to deal with the problems of mentally disturbed people by ignoring them. I do not believe that any rational explanation for the exclusion of chlorpromazine from the Formulary can be given.

A case could also be made out for the inclusion of imipramine ("Tofranil"), the first drug generally available to have any useful effect in cases of severe depression.

[2] "Social Psychiatry", from "Lectures on the Scientific Basis of Medicine", 1956-57, 6: 116.

If the Health Department in its wisdom believes that this drug is not suitable for general use, it should at least be available as a drug "for a specified disease", or perhaps to be prescribed by psychiatrists only.

Yours, etc.,

Larundel Hospital,
Plenty Road,
Bundoora, Victoria.
February 25, 1960.

JACK L. EVANS.

Notice.

PETHIDINE ADDICT.

WE have been requested by the Medical Secretary of the Victorian Branch of the British Medical Association to publish the following description of a pethidine addict who is operating at present:

This man has been operating mainly in the Melbourne area for over five years, but has imposed on practitioners and hospitals in Sydney and Hobart. He presents with a history of having had a right nephrectomy, and he very convincingly simulates an attack of left renal colic, sometimes even producing a specimen of artificially blood-stained urine.

He is an intelligent, well-spoken man, aged 34, with a mild deformity of the nose resulting from an old fracture. He is 5 ft. 9 in. in height, and inclined to be heavily built. He has dark reddish-brown hair, brown eyes, and fair complexion with numerous freckles. He has five abdominal scars—(i) an incision in the right flank in the renal area, (ii) a McBurney's incision in the right iliac fossa, (iii) a left upper paramedian incision, (iv) an incision in the left flank in the renal area, and (v) a transverse incision in the left iliac fossa. Scars (iv) and (v) are comparatively recent, and still retain a pink coloration.

Post-Graduate Work.

ROYAL PRINCE ALFRED HOSPITAL: EAR, NOSE AND THROAT DEPARTMENT.

Seminar Programme, 1960.

THE staff of the ear, nose and throat department of the Royal Prince Alfred Hospital will conduct a seminar on the second Saturday of every month at 8 a.m. in the Scot Skirving Lecture Theatre. The main speaker will not exceed forty minutes, and there will be a discussion at the conclusion of his remarks. All medical practitioners and clinical students are invited to attend.

At the next seminar, to be held on March 12, Dr. B. B. Sheaves will speak on "Malignant Tumours of the Larynx—Pathology".

THE MELBOURNE MEDICAL POST-GRADUATE COMMITTEE.

Lecture by Dr. Hattie Alexander.

DR. HATTIE ALEXANDER, Professor of Pædiatrics at Columbia University, New York, will be a guest lecturer at Fairfield Infectious Diseases Hospital, Victoria. She has contributed considerably to the basic study of the infective portions of enteroviruses. All members of the medical profession are invited to hear her lecture on "The Nature of the Staphylococcus Problem", on Monday, March 28, 1960, at 8.15 p.m., at the Medical Society Hall.

Notes and News.

Asia-Pacific Academy of Ophthalmology: First Congress.

The Executive Committee in charge of the first congress of the Asia-Pacific Academy of Ophthalmology, which will

DISEASES NOTIFIED IN EACH STATE AND TERRITORY OF AUSTRALIA FOR THE WEEK ENDED FEBRUARY 6, 1960.[1]

Disease.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern Territory.	Australian Capital Territory.	Australia.
Acute Rheumatism	4(2)	7(7)	4(4)	..	1(1)	..	..	..	16
Amœbiasis	..	..	..	..	..	..	..	..	..
Ancylostomiasis	..	..	..	..	..	..	7	..	7
Anthrax	..	..	..	..	..	..	..	..	..
Bilharziasis	..	..	..	..	..	..	..	..	..
Brucellosis	..	..	..	..	..	..	..	..	..
Cholera	..	..	..	..	..	..	..	..	..
Chorea (St. Vitus)	1(1)	1	..	..	..	..	..	..	2
Dengue	..	..	..	..	..	..	..	..	..
Diarrhœa (Infantile)	5(2)	21(21)	..	..	..	..	..	..	26
Diphtheria	..	2(2)	..	..	..	..	..	..	2
Dysentery (Bacillary)	..	1(1)	..	1(1)	1(1)	..	1	..	4
Encephalitis	1	1	..	..	..	..	..	..	2
Filariasis	..	..	..	..	..	..	..	..	..
Homologous Serum Jaundice	..	..	..	..	..	..	..	..	..
Hydatid	..	..	..	..	..	..	..	..	..
Infective Hepatitis	75(33)	63(45)	13(4)	19(7)	2(1)	..	..	1	173
Lead Poisoning	..	..	..	..	..	..	..	..	..
Leprosy	..	..	..	..	..	..	..	..	..
Leptospirosis	..	..	1(1)	..	..	..	..	..	1
Malaria	..	..	1(1)	..	..	..	..	..	1
Meningococcal Infection	1	2(1)	1	..	..	..	..	..	4
Ophthalmia	..	..	..	..	..	..	..	..	..
Ornithosis	..	..	..	..	..	..	..	..	..
Paratyphoid	..	1(1)	..	..	..	..	..	..	1
Plague	..	..	..	..	..	..	..	..	..
Poliomyelitis	1	..	..	..	..	..	..	..	1
Puerperal Fever	..	..	..	..	..	..	..	..	..
Rubella	..	16(14)	..	3(3)	1(1)	..	..	..	20
Salmonella Infection	..	..	..	4(4)	..	..	1	..	5
Scarlet Fever	1(1)	6(2)	2(1)	..	1(1)	..	..	..	10
Smallpox	..	..	..	..	..	..	..	..	..
Tetanus	..	..	..	..	..	..	..	..	..
Trachoma	..	..	..	..	..	..	3	..	3
Trichinosis	..	..	..	..	..	..	..	..	..
Tuberculosis	29(20)	40(34)	5(1)	6(5)	6(5)	2(1)	2	1	91
Typhoid Fever	..	..	..	..	..	..	..	..	..
Typhus (Flea-, Mite- and Tick-borne)	..	..	1	..	..	..	..	..	1
Typhus (Louse-borne)	..	..	..	..	..	..	..	..	..
Yellow Fever	..	..	..	..	..	..	..	..	..

[1] Figures in parentheses are those for the metropolitan area.

be held in Manila, Philippines, from October 9 to 13, 1960, announces that the following ophthalmologists have consented to give guest lectures during the sessions: Dr. Joaquin Barpaquer (Spain), "Surgery of the Crystaline Lens"; Dr. Saul Sugar (U.S.A.), "Angle Closure Glaucoma"; Dr. Tulsidas (India), "On Trachoma"; Dr. Geniniano de Ocampo (Philippines), "Choice of Operations in Keratoplasty"; Dr. Akira Nakajima (Japan), "Congenital and Hereditary Blindness in Japan"; Dr. J. Bruce Hamilton (Australia), "On Diabetic Blindness"; Dr. D. L. McLaren (Africa), "On Nutritional Blindness".

More than 25 free papers and the titles of several films have already been received by the committee in charge of the scientific programme and more are expected. To give an opportunity for other ophthalmologists who may want to read free papers during the congress, the last date for submission of titles and abstracts (of not more than 200 words) has been extended to May 31, 1960. Judging from the response of the ophthalmologists from the Asia-Pacific region, this congress promises to be well attended, and in return the host Filipino ophthalmologists are exerting their best effort to make it successful and memorable both scientifically and socially.

Corrigendum.

BRITISH MEDICAL ASSOCIATION, VICTORIAN BRANCH: SCIENTIFIC.

WE are informed that an error has occurred in the report in the Journal of February 27 of the meeting of the Victorian Branch of the British Medical Association held on May 20, 1959, at the Commonwealth Serum Laboratories, Melbourne. In the second paragraph of the first column on page 353, the third and fourth sentences should read as follows:

> There were three main types of reaction—eczema vaccinatum, generalized vaccinia and progressive vaccinia. The first two complications might be associated with abnormalities in the gamma globulin fraction in the blood, but the last-mentioned complication appeared to be a specific inability to form antibodies to the virus.

University Intelligence.

UNIVERSITY OF SYDNEY: MEDICAL LIBRARY.

THE Medical Library in the New Medical School of the University of Sydney will remain open from 9 a.m. to 10 p.m. on week-days and from 9 a.m. to 12 noon on Saturdays for a trial period during Lent term, 1960.

Nominations and Elections.

THE undermentioned have applied for election as members of the New South Wales Branch of the British Medical Association:

Mitchell, John L., L.M., 1925, R.C.P. (Ireland), L.L.M., 1925, R.C.S. (Ireland), P.O. 11, The Rock, New South Wales.

Childs, Winifred, M.B., B.S., 1959 (Univ. Sydney), 400 Darling Street, Balmain.

Peukert, Joseph, M.D., 1944 (Univ. Prague) (licensed under Section 21c (4) of the *Medical Practitioners Act*), 30 Melville Avenue, Strathfield.

Narkowicz, Stefan, M.D., 1937 (Univ. Wilno) (regional registration under Section 21A of the *Medical Practitioners Act*, 1938-1958), P.O. Box 39, Bundarra, New South Wales.

Deaths.

THE following deaths have been announced:

ROBERTSON.—Robert Affleck, on February 21, 1960, at Albury, N.S.W.

WINTERBOTHAM.—Lindsey Page Winterbotham, on February 26, 1960, at Brisbane.

MOLLENHAUER.—Paul Mollenhauer, on February 28, 1960, at Rose Bay, New South Wales.

WADE.—Burton Gregory Wade, on February 28, at Lindfield, N.S.W.

Diary for the Month.

MARCH 14.—Victorian Branch, B.M.A.: Finance Subcommittee.
MARCH 15.—New South Wales Branch, B.M.A.: Medical Politics Committee.
MARCH 16.—Victorian Branch, B.M.A.: Branch Meeting.
MARCH 17.—Victorian Branch, B.M.A.: Executive of Branch Council.
MARCH 18.—New South Wales Branch, B.M.A.: Ethics Committee.
MARCH 19.—Western Australian Branch, B.M.A.: Annual General Meeting.
MARCH 22.—Tasmanian Branch, B.M.A.: Southern Subdivision.
MARCH 22.—N.S.W. Branch, B.M.A.: Hospitals Committee.
MARCH 23.—Victorian Branch, B.M.A.: Branch Council.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Medical Secretary, 135 Macquarie Street, Sydney): All contract practice appointments in New South Wales.

South Australian Branch (Honorary Secretary, 80 Brougham Place, North Adelaide): All contract practice appointments in South Australia.

Editorial Notices.

ALL articles submitted for publication in this Journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations, other than those normally used by the Journal, and not to underline either words or phrases.

Authors of papers are asked to state for inclusion in the title their principal qualifications as well as their relevant appointment and/or the unit, hospital or department from which the paper comes.

References to articles and books should be carefully checked. In a reference to an article in a journal the following information should be given: surname of author, initials of author, year, full title of article, name of journal, volume, number of first page of article. In a reference to a book the following information should be given: surname of author, initials of author, year of publication, full title of book, publisher, place of publication, page number (where relevant). The abbreviations used for the titles of journals are those of the list known as "World Medical Periodicals" (published by the World Medical Association). If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full date in each instance.

Authors submitting illustrations are asked, if possible, to provide the originals (not photographic copies) of line drawings, graphs and diagrams, and prints from the original negatives of photomicrographs. Authors who are not accustomed to preparing drawings or photographic prints for reproduction are invited to seek the advice of the Editor.

Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary is stated.

All communications should be addressed to the Editor, THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales. (Telephones: MW 2651-2-3.)

Members and subscribers are requested to notify the Manager, THE MEDICAL JOURNAL OF AUSTRALIA, Seamer Street, Glebe, New South Wales, without delay, of any irregularity in the delivery of this Journal. The management cannot accept any responsibility or recognize any claim arising out of non-receipt of journals unless such notification is received within one month.

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